Suicide and Contemporary Science Ficton

Carlos Gutierrez-Jones

SUICIDE AND CONTEMPORARY SCIENCE FICTION

Suicide and Contemporary Science Fiction examines the fascination with suicidal crises evident in a range of science fiction. Specifically, this study explores a seemingly counterintuitive proposition: in moments of dramatic scientific and technological change, the authors of these works frequently cast self-destructive episodes as catalysts for beneficial change. Carlos Gutiérrez-Jones argues that this creative self-destruction mechanism is invoked by H. G. Wells as a means of negotiating Victorian anxieties regarding evolutionary theory, by Stanislaw Lem as he wrestles with the prospect of nuclear self-destruction at the dawn of the space age, by William Gibson as he considers the development of artificial intelligence, by Christopher Nolan as he explores the cybernetic colonization of the unconscious, by Rian Johnson as he links aspects of video gaming to the neoliberal militarization of institutions, and by Margaret Atwood as she considers impending ecological disaster and the rise of bioterrorism. These authors often depict such scientific and technological changes in a fashion that requires the central characters to transform themselves in hopes of remaining relevant in a radically altered environment.

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For my uncle, James S. Coleman

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This project grew directly from classroom discussions, and with these origins in mind, I thank my students for their engaged readings of the literature and study of the films, their consistent willingness to climb out on limbs, and their patience as they negotiated my evolving obsession with the themes explored in this book. I inherited my department's science fiction class eight years ago; in fact, my department chair at the time, William Warner, had to do some gentle arm-twisting because taking on the course was a bit of a departure for me. I had grown up greatly enjoying science fiction, but I had not previously dived into the wealth of critical work devoted to the genre. I will be forever grateful to Bill for giving me the push because the years I have been teaching this course have been enormously rewarding. In part, this is because the materials are tremendously rich; in part, it is because the students who take the science fiction course are diverse in terms of their fields of study and often deeply committed to the questions driving science fiction. When these students came to class, they were motivated in a way that was unique. I hope that the book in hand conveys the excitement and energy of those many classroom and office hour conversations.

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As noted, a version of my chapter on William Gibson's novel appeared originally as a journal article: "Stealing Kinship:

Neuromancer and Artificial Intelligence" [*Science Fiction Studies* 122, 1/1 (March 2014): 69–92]; I thank the editors of the journal for granting me permission to reprint this material. I also thank the M. C. Escher Company for granting permission to reproduce *Spirals* as the cover image for the book (M. C. Escher's "Spirals" © 2014 The M. C. Escher Company – The Netherlands. All rights reserved. www.mcescher.com).

Introduction

Suicide and Contemporary Science Fiction explores a fascination with suicidal crises evident in a range of science fiction, including a number of the genre's most celebrated examples. Examining this thematic genealogy, the study presents a seemingly counterintuitive proposition: the artists frequently cast self-destructive episodes as catalysts for beneficial change. It may seem odd that something as traumatic as a suicidal crisis, even in a fictional representation, could serve as a model for productive adaptation, but the texts examined here are in fact quite forceful in this regard. In broad terms, this fascination with suicidal "rebooting" may be traced back to the traumatic birth of modern science. By upending the scholastic paradigm that preceded it, scientific method appeared to challenge, if not destroy, sources of long-established religious meaning.[1] As Mark Rose has argued in *Alien Encounters*, science fiction evolved to mediate this shift, negotiating a fundamental tension in modern culture between material and spiritual concerns (47). René Descartes and Sir Isaac Newton might dissect the rainbow, making profound mathematical and optical advances in the process, but discoveries of this sort would always have a price, or so insisted observers such as John Keats, who greeted the scientific discoveries regarding the rainbow, formerly a sign of God's covenant with humanity, as a kind of deicide.[2] Broad traumas associated with subsequent scientific revolutions extend these dynamics beyond science's origins (e.g., to Darwin's theory of evolution, the arrival of the nuclear age, the conquest of space, prospects of bioengineered terrorism, the possibility of human obsolescence in an era of artificial intelligence).

This continuing precariousness brings to the fore an important aspect of the cultural work undertaken by science fiction: its speculative mediation of profound upheaval. For science fiction, such crises (realized or anticipated) have been both deeply disturbing and distinctly energizing: this tension helps explain the genre's seemingly paradoxical fascination with "productive" suicidal crises. Scientific revolutions of the sort noted prompt speculative models of change that frequently emphasize extreme remaking rather than deliberate and sustained adapting: utopian/dystopian leaps rather than gradual reforms. As well, many of the artists examined convey an urgency fed by indications that scientific and technological change is accelerating at a remarkable rate. Such is especially evident in the more contemporary works, which register the exponential growth of computing power since the 1970s; however, the notion that advances in science and technology might be wildly outstripping humanity's readiness to adapt to them (intellectually, ethically, biologically, spiritually) has been apparent right from the start of the genre, here associated with the "scientific romances" of H. G. Wells and his cohort.[3]

Suicide and Contemporary Science Fiction gives priority to studying the primary works engaged in their specific historical contexts of perceived crisis: *The Island of Doctor Moreau* and Victorian anxieties regarding Darwin's theory; *Solaris* and the prospect of nuclear self-destruction at the dawn of the space age; *Neuromancer* and the development of artificial intelligence; *Inception* and the cybernetic colonization of the unconscious; *Looper* and a neoliberal rush to corporate rule, inspired by and dependent on violent gaming; and finally the *Maddaddam* trilogy in the context of impending ecological disaster and the rise of bio-terrorism. Building from these particular circumstances, each chapter functions as a case study. Taken together, these chapters capture paradoxical fascinations with, and anxieties about, changes presented as though they existed beyond individual control; frequently, the artists depict these changes in a fashion that requires the central characters to "reboot" themselves in order to survive, or to remain relevant, in a radically altered environment. Crucially, the artists offer central characters who are

notable for the ways in which they are fundamentally stuck in particular habits of thought, in patterns that are themselves destructive (to the characters in question, to other humans, to the environment, or to wonder as a sustaining human activity). In most cases, these characters significantly alter or break their attachments to these habits of thought while going through their suicidal crises. The most obvious analogy might be to an addict "bottoming out" in order to begin an otherwise impossible recovery. That such an analogy is appropriate when considering these works speaks volumes about the tenacity of the habits of thought that require surmounting, and the artists' assessments of them.

As much as the artists examined in the study employ speculative fiction to look "forward" or "elsewhere," they are also deeply motivated by historical inquiry and analysis. Although it is often necessary for the audience of these works to draw out subtle or implicit references of this nature, the historical aspects of the works define loaded contexts that in turn strategically shed light on the specific habits of thought targeted by the artists. In this manner, the historical aspects of these texts reveal a great deal about the "addictions" that propel the "bottoming out," or suicidal crises, represented. For many of the artists examined in this study (Octavia Butler, Stanislaw Lem, William Gibson, Christopher Nolan, and Rian Johnson), something like a regeneration through self-directed violence facilitates new cognitive and affective vistas, thereby allowing new modes of thinking, feeling, and imagination. In these cases, the disruption of identity associated with suicidal breakdown signals an opportunity to rebuild in radical fashion, and to the extent that this reconstruction is shaped by a critical awareness of previous destructive habits (e.g., blinding anthropomorphism, narcissism, damaging sublimations of grief), it grounds what the artists present as a "beneficial" turn, even if such entails only greater self-awareness. In some cases, this renewal is far more tentative (H. G. Wells' *The Island of Doctor Moreau*), while in other instances (Margaret Atwood's *Maddaddam* trilogy), the model of "regenerative" suicidal change is itself subject to fundamental critique as enacting a repetition of the very habits it purports to rethink. Whatever assessment of

the suicidal transformation model is finally invited by the specific works, they all bear witness to the attraction this mechanism holds over the social imaginaries they depict.

It is difficult to say exactly why this topic has not received more critical attention in the criticism devoted to the fiction and film examined here, especially given how strongly the suicide theme imposes itself. In general, suicide as a research topic tends to present distinct difficulties attached to the moral, spiritual, and political anxieties it produces. Georges Minois emphasizes this point in *History of Suicide: Voluntary Death in Western Culture*, a comprehensive analysis of the complicated factors influencing understandings of suicide. As Minois notes, the fraught response to suicide has frequently left researchers struggling to find scholarly consensus about even the most basic terminology and concepts. Although suicide has received considerable research attention since Emile Durkheim's landmark 1897 study on the topic, definitions of the term itself have been regularly contested, a situation that reflects ongoing methodological struggles.[4] As Minois demonstrates, these methodological struggles cannot be separated from the philosophical, religious, moral, and cultural implications attached to voluntary death. Along these lines, Minois' expansive study provides considerable evidence of the social reprobation that has frequently been directed toward suicides (self-harm frequently taken as an affront to God and government alike), and he suggests that the silence and dissimulation surrounding the topic present challenges for which cultural criticism is well suited. Tracking a good deal of variation regarding how Western societies have viewed suicide over time, Minois notes that the term effectively displaced "self-murder" during the Enlightenment, a shift that softened this reprobation to a degree. Although Minois finds a new candor about the question of suicide in the modern period (a shift epitomized by Shakespeare's "To be, or not to be"), continuing anxieties regarding suicide help account for ongoing methodological debates.

For the purposes of the study at hand, suicidal crises are understood as behaviors with implicit or explicit suicidal intent (behavior that is self-directed and deliberately results in injury to oneself), or as

ideation regarding such action. This definition of suicidal self-harm was presented in 2011 by the Centers for Disease Control in an effort to improve the reporting and study of suicidal behavior.[5] Two aspects of the CDC's revision of terminology deserve particular attention. First, the CDC's definitions are distinguished by their focus on intent. Specifically, suicidal self-directed violence includes activity that results in, or *holds the potential for*, injury; by recognizing both suicidal behavior and ideation, the report gives special weight to intent. The ultimate physical effect of a behavior has been displaced as a defining feature. Second, the language used to define aspects of suicidal behavior has been reformulated to downplay perceived judgments regarding intent. Use of "failed," "successful," and even "completed" suicides is explicitly criticized by the CDC report, as such may confer values undermining treatment. In sum, the CDC's revisions reflect an effort to both recognize and address intent, a shift in keeping with the culturally nuanced approach to the topic advocated by Minois. Inasmuch as intent evolves in a cultural context, suicidal crises are likely to resonate in ways that are both individual and collective.

Although the general underdevelopment of suicide as critical focus tends to carry over to the scholarship produced thus far regarding the fiction and film examined in this study, many important trends in science fiction criticism set the stage for the readings pursued in the following pages. Although this study cannot offer a comprehensive engagement with, let alone overview of, this criticism, which is varied, rich, and expansive, invoking some selective examples will demonstrate how the interpretations developed here have been built on influential theories and analyses of science fiction.

A landmark study, Darko Suvin's *Metamorphoses of Science Fiction* provided one of the first rigorous theories of the genre, a Marxist-inflected view that defines science fiction as a literature of "cognitive estrangement" (4). Tracing science fiction's roots back to utopian writing, Suvin locates in the genre a fundamental tension between imagined worlds and the worlds inhabited by the artists and their audiences (13–14). For Suvin, the particular nature of this ontological tension defines the genre: readers and viewers should

be able to "reverse engineer" the "real" world of the artist and/or audience from the imagined (estranged) world, and this reverse engineering effort should rely on the accepted scientific and technological possibilities of the existing world. In other words, science fiction imagines change, and specifically developments that approximate what might seem realistic (according to science and technology) given the known starting point of the artist's/audience's world. Suvin's theory has come under fire for the way it too steadfastly polices the boundary between fantasy and science fiction (what seems like realistic possibility and what does not), but it nonetheless continues to provide a central organizing principle for many scholars of the field.[6] In this regard, science fiction is deeply invested not simply in imagining change, but also in assessing hypothetical and historically informed models of change (e.g., Atwood's Gilead in *The Handmaid's Tale*, a dystopian society whose practices are almost wholly drawn from historical precedents).[7]

Science fiction scholarship extends well beyond Suvin's particular sociological and Marxist-oriented contribution, recently exploring, for example, aesthetically reframed cognitive considerations (Istvan Csicsery-Ronay Jr.'s *The Seven Beauties of Science Fiction*), but even so, the dominant critical tendency has taken the investment in change as a core artistic concern. Even when the roots of science fiction are traced to different sources, for example romance literature (Mark Rose's *Alien Encounters*), the emphasis remains relatively consistent: science fiction "challenges our sense of the stability of reality by insisting upon the contingency of the present order of things. Indeed, science fiction not only asserts that things may be different; as a genre it insists that they will and must be different, that change is the only constant rule and that the future will not be like the present" (Rose, 21). As the genre's name indicates, it is deeply invested in the kinds of change derived from the discoveries, methods, and implications (social, material, metaphysical) of science. The plausibility vouchsafed by science supplies the "cognitive" aspect of Suvin's definition (the foundation for the plausible reverse engineering), but more importantly, science as a motor for change hails the genre into being and feeds its extension.[8]

The economist Joseph Schumpeter tapped this scientific motor when he recast capitalism as an evolutionary enterprise, in the process popularizing the phrase perhaps inevitably recalled by this study: "creative destruction."[9] However, even though Schumpeter's use of the term presents a rough analogue for creative self-destruction (in his version innovative productivity is unleashed as economic orders and existing wealth are essentially destroyed and supplanted by new iterations), his relative confinement to economic considerations produces a tunnel vision: "creative destruction" fails to engage its debt to evolutionary theory, including the tensions between spiritual and material concerns animated by Darwin's writings. In particular, the concept of "creative destruction" fails to account for the baggage that accompanies the quasi-utopian, cataclysmic model of change it envisions; this baggage includes a tendency toward historical amnesia and the legitimation of violence posed as regenerative innovation.[10] Creative self-destruction, as an alternative concept, is more nuanced in part because it does not turn a blind eye to the costs of change, especially the traumas entailed when certain forms of radical adaptation are promoted at the sacrifice of alternative modes of change. Literature proves an especially well-suited venue for examining such costs because, as Mikhail Bakhtin argued, the best literature critically reanimates all manner of institutional discourses in hypothetical situations that mimic lived experience, and in this way literature may model and analyze how dynamic forms of understanding are constructed within a field of options.[11]

To help clarify the appeal of the creative self-destruction approach to the artists examined in this study, I offer a brief case study of Octavia Butler's "Bloodchild," a work whose conflicted critical reception reinforces the importance of coming to terms with the suicidal crisis at its heart. Butler's oeuvre has won widespread recognition for its subtle exploration of intertwined social, political, and psychological dynamics, including conflicts carrying the weight of traumatic historical legacies (e.g., slavery, warfare, colonization); faced with such challenges, a number of her more prominent characters wrestle with suicide, and in these representations one finds an

extended and thoughtful consideration of creative self-destruction. Although many of these characters choose to survive, Butler conveys a complexity associated with these decisions, one that frequently poses suicidal crisis as a transformative experience.[12]

"Bloodchild"

Winner of both Nebula and Hugo awards (in 1984 and 1985, respectively), Butler's short story "Bloodchild" illustrates this "rebooting" process, and particularly the ways it has been associated with challenging destructive habits of thought. Set in a distant future, the story presents a cohort of humans (Terrans) who have escaped enslavement on a distant Earth only to find themselves of necessity drawn into a symbiotic relationship with a species native to their new world: the insectlike Tlic. Maintaining a society resembling what one might find on Earth, the Tlic are most prominently distinguished biologically, and especially by their insectlike need to implant their eggs in hosts. Prior to the arrival of the Terrans, the Tlic had depended on native host animals, but these developed a resistance to the Tlic's reproductive process, a situation that threatened the Tlic with decline, if not extinction. Early contact among the Terrans and the Tlic was intimate, if not consensual, because the Terrans proved to be ideal hosts, producing healthier larvae and adult Tlic; the Terrans also demonstrated an ability to repeat the process multiple times. These early encounters were also strongly shaped by the collective traumas carried by both populations. Fearful of their reproductive vulnerability, the Tlic initially treated the Terrans like livestock, thereby reproducing many aspects of the Earthly slavery that had forced the Terrans into exile.

Although the principal action of the story is set at some remove from the initial conflicts between Tlic and Terrans, it is close enough in time and memory that the principal characters fear a return to this past. As a result, the characters carry an awareness that current struggles may revive the earlier violence. In the story's present, "progressive" social engineering is supplanting the neo-slavery initially imposed by the Tlic on the Terrans. To this end, a segment

of the Tlic government is charged with protecting the Terrans, and with merging Terran and Tlic families, with the ultimate goal of sustaining a symbiotic relationship among independent and consenting partners. For this transitional period, the Terrans are restricted by the Tlic government to a preserve, ostensibly to protect them from the previous forms of reproductive slavery. As part of the preserve arrangement, Terrans are (apparently ineffectively) banned from possessing guns, which had afforded some limited ability to fight their earlier livestock status.

The preserve setting, and the Tlic's dissemination of sedating foods, convince some interpreters of the story that the initial Tlic slavery of the Terrans is anything but a thing of the past; for example, Elyce Rae Helford finds in the social engineering a recycling of many techniques essential to Earth-bound slavery.[13] In an afterword published with the story in 2005, Butler takes issue with such analyses, instead calling this a story about "paying the rent," coming of age, and male pregnancy (30–32). In her view, it is foremost a love story. If one accepts Butler's intervention in the critical reception of the story, a different sort of question asserts itself: why would she construct a tale of symbiosis and love in a manner that seems so inclined to invite associations with slavery? And what seemingly miraculous mechanism might account for the transcendence achieved, however fragile this utopian victory might be?

The central character of "Bloodchild," a Terran named Gan, wrestles precisely with concerns one might infer from Butler's view of the story. Although he is just entering adulthood, Gan has been prepared for impregnation by a life-long Tlic partner. His perhaps too easy acceptance of his role as future host is deeply challenged when he encounters a "birthing" gone wrong: one subverted by disease, but also by the Terran host's fear. Witnessing the ultimately successful but extremely painful cesarean-like birth, Gan confronts the alien-ness of something that he thought he understood and embraced. In addition, Gan's anxieties are fed by his mother's misgivings (she is angry with herself because she cannot escape the feeling she has bartered her son for the benefits of Tlic protection) and by his brother's eagerness to avoid Gan's fate at all costs. This

brother, Qui, is so determined in this regard that he effectively destroys himself in all but a physical sense.

Despite being horrified by what he witnesses, Gan plays a crucial role in saving the endangered Terran host during the birthing scene – Gan uses a hidden family gun to kill and thereby provide a transitional host animal – but the episode disturbs Gan so profoundly that he subsequently turns the same gun on himself during a climactic confrontation with his Tlic partner, T'Gatoi. Crucially, this crisis is marked by Butler as facilitating a fresh self-examination of Gan's intentions, a form of reflection distinguished by a new sense of critical distance. When Gan takes up the rifle just before his crisis, he assumes that he is doing so in order to clean and oil the weapon before returning it to its hiding spot. Instead, he loads the gun as if he were watching someone else undertake the action. The move toward suicide is therefore marked by a self-consciousness about conflicted intentions and mental processing. When T'Gatoi stumbles upon Gan holding the weapon, Gan puts the barrel under his own chin. Gan knows that there is another in his family who could willingly serve as a host, Gan's older sister, Xuan Hoa, so more appears to be involved in the suicidal gesture than self-interest. As if to confirm this point, Gan has a confrontation with his brother immediately before the suicidal episode. During this exchange, Qui explicitly reveals his foremost concern: to avoid being a host at any cost, even if doing so requires sacrificing his siblings. Gan reacts to Qui's unbridled self-interest as if Qui is being paranoid, since it is highly unlikely that Qui would be forced to host given his sister's willingness to assume the role. However absurd Qui may seem, his behavior confirms for Gan that using his sister as a shield (as Qui would use either of his siblings) would have its own great cost.

This framing of Gan's suicidal gesture – the critical appraisal invited by Qui's refusal to pay the rent – suggests that Gan sees no hope of escaping a vulnerability that engulfs his family, and the Terrans as a whole. A great deal turns on how one reads this hope of escape. If one follows Helford in emphasizing those aspects of the story that invite comparisons to slavery (the Terrans being corralled like livestock into a preserve) the scene might be said to evoke one of

the longest-standing defenses of suicide in Western culture, Seneca's argument that, faced with the prospect of unending suffering, it is better to end one's life (Minois, 50–52). Holding the gun to his chin, Gan may be reading his family's situation in this manner. But Butler sees something different at stake, and this difference is entailed in Gan's decision not to pull the trigger. Specifically, the choice to live and the actions undertaken by Gan afterward seem to support an alternative "reading" of his life and the Terran situation. In articulating this reading of his earlier actions and thoughts, Gan explicitly abandons his brother's interpretation of their lives among the Tlic. Qui can see nothing more than manipulation and enslavement, and therefore an unbridgeable gulf between fixed entities: Terran and Tlic. The suicidal "rebooting" at the center of the story is the bridge built across this divide, a structure supported by an array of actions, sentiments, and ideas throughout the story, but an array of connections that only come clearly into view for Gan after the transformative suicidal crisis.

Although the story takes place over the course of a single day, readers are provided ample evidence that the relationships among the hybrid Tlic-Terran families can be nuanced. As physically alien as the Tlic appear, Butler grants T'Gatoi and her fellow Tlics emotional responses that are surprisingly close to human patterns. This common ground is the basis for how Tlic and Terrans act upon one another (the caring, sisterly relationship between Gan's mother and T'Gatoi provides an example, but this mutuality is most deeply witnessed between Gan and T'Gatoi at the end of the story). Such mutual action is crucial because it makes independence, consent, familial love, and kinship thinkable, even with the history of enslavement by the Tlic. In the afterword, Butler notes that she was fascinated by the idea of a man embracing pregnancy out of love for the other, and not as a means to control, or to demonstrate superiority or self-sufficiency – frequent motives for male pregnancy and its analogues in science fiction (30). Feeling trapped in the role of host and profoundly unsure about the nature of the relationship between Tlics and Terrans, Gan puts the gun to his throat even as T'Gatoi emphasizes that Gan will not be forced. At issue in this

exchange is the meaning of Gan's choice itself, and although he initially tries to interpret his situation as Qui might (by telling T'Gatoi to impregnate his sister), ultimately he realizes a connection with T'Gatoi that merits nurturing and risk taking. At this juncture, once he has seen anew the mutuality he shares with T'Gatoi, only then does Gan take the gun barrel from under his chin. Gan's decision to host is framed neither as heroic (Gan sacrificing himself to save his sister), nor as despairing (a sacrifice of hope in a world presenting no options); instead, it represents an act of love, one that is nothing short of miraculous according to Butler.[14]

This turn in the story is compelling because of the quality of caring that has been demonstrated between Gan and T'Gatoi throughout. This caring is again evident in the subsequent insemination scene and its immediate aftermath. Here, Gan continues to analyze his suicidal actions and concludes that he was motivated, at least in part, by a fear of the birthing process itself. T'Gatoi wishes aloud that Gan had never seen a birth, problematic or not, and Gan takes this opportunity to argue the opposite. Specifically, he suggests that Terrans should see "healthy" births often and from a young age in order to undercut preemptively the terror that has been so disabling for his brother, and that fed Gan's suicidal crisis. Butler uses particularly loaded language in portraying the reception of Gan's idea.

> "I had never known a Terran to see a birth and take it well. Qui has seen one, hasn't he?"
>
> "Yes."
>
> "Terrans should be protected from seeing."
>
> I didn't like the sound of that – and I doubted that it was possible. "Not protected," I said. "Shown. Shown when we're young kids and shown more than once. Gatoi, no Terran ever sees a birth that goes right . . .."
>
> She looked down at me. "It's a private thing. It has always been a private thing."
>
> Her tone kept me from insisting – that and the knowledge that if she changed her mind, I might be the first public example. But I had planted the thought in her mind. Chances were it would grow, and eventually she would experiment. (28–29)

Given that mutuality must of necessity be fragile in this preserve setting, it is fitting that this insemination scene should constitute for Gan and T'Gatoi the implanting of ideas with radical potential. Relinquishing the privacy T'Gatoi and her fellow Tlic attach to the birthing would entail a diminishing of control and a greater acceptance of risk. At the same time, by opening the act to Terran witnessing, the Tlic could confirm the mutuality that founds the social engineering project. Gan's desire for such participation grows out of his belief in the symbiosis itself, a belief enabled by his transformative crisis.

This symbiosis entails a significant shift in what it means to be human, and, as presented by Butler, the difficulty of making this transition nearly costs Gan his life. All the same, the experience of, and movement through, the suicidal moment constitutes an integral part of Gan's development. In the story's narrative economy, this crisis provides the means of confronting Gan's latent habits of thought, and the various cognitive and emotive patterns he has associated (not always self-consciously) with being human (limits to empathy, acceptance of certain modes of reproduction and sexuality). Amanda Thibodeau compellingly engages this dynamic as she situates "Bloodchild" in the context of queer studies debates regarding utopianism.[15] Arguing that the story conveys Gan's "queer desire to create something comprehensible, even normal, out of something abject" (270), Thibodeau asserts that, despite reproducing certain heteronormative assumptions, "Bloodchild" rewrites space exploration and discovery as it focuses on Gan's "attempts to transcend his feelings of abjection and horror in order to reach a new understanding of intimacy with T'Gatoi" (272). The mechanism by which Butler animates this queering revision – the suicidal crisis – has yet to receive focused critical engagement. Most obviously, the extremity of the crisis presented by Butler sets the stage for the radical quality of the change she envisions, but the performance of the crisis also reveals its own particular language, as it were, one that authors like Butler invite readers to analyze so as to gain greater purchase on the assumptions regarding humanness in play.

In this vein, Gan targets his throat as if self-destruction could put an end to the questions that haunt him most, and that he has

seemingly repressed, queries that Thibodeau suggests might in themselves constitute a sort of "coming out" (269). Just before aiming the weapon, he articulates at a whisper: "Who are you?" and "What are we to you?" (24). The hush attached to these fundamental questions speaks volumes about the difficulty Gan has voicing them, and makes his openness about his crisis at the end of the story all the more meaningful. His suggestions regarding sharing birth experiences are an extension of what he has gained through the crisis: the need for candor, especially in precarious moments. Such is the basis of the mutuality T'Gatoi and Gan seek, and not just for themselves.

The story concludes with T'Gatoi asking Gan if he would have destroyed himself. He responds, "I could have done that. I nearly did. That's Qui's 'away.' I wonder if he knows." When T'Gatoi asks what Qui might know, Gan does not answer, but implicit here is the suggestion that Qui's various attempts to "run away" from his situation (physically, mentally, emotionally) are fundamentally self-destructive. The suicidal crisis in the story is both the epitome of Qui's escapism (attempts to silence and deny the challenges posed by their isolated context far from Earth) and the catalyst for seeing this problematic mindset in a new, critical light. The narrative performs a paradox; it finds a catalyst for voice in an ultimate act of silencing: creative self-destruction.

Toward a Genealogy of Creative Self-destruction

This study follows an historical organizational logic in two senses. Most obviously, it starts with H. G. Wells and moves chronologically to Margaret Atwood's *Maddaddam* trilogy. In addition, each chapter takes some care to locate its primary texts in historical moments that represent for the artists contexts of social transformation. These social upheavals are each associated with profound scientific or technological changes, conceptual tectonic shifts with deep implications for understandings of humanness. In *The Island of Doctor Moreau*, the focus of my first chapter, Wells responds to the crisis precipitated by Darwin's theory of evolution and the challenges it posed to human exceptionalism. A text riddled with suicidal crises, Wells' story might

be said to culminate with the rescue of its stranded narrator, Edward Prendick, but if such is the case, his return to civilization brings little, if any, relief. His post-rescue suffering marks the impacts of various traumas challenging his notions of humanness, but it is also strongly colored by the way he finally leaves the island: with no wish to be found at sea, no desire to reconnect with humanity. Here I argue that Prendick's found document, the narrative itself, constitutes a creative outcome made possible by his crisis. In addition, this document grants Moreau's hybrid human-animals tentative agency in voice, another indicator that *The Island of Doctor Moreau* constitutes an initial exploration of the creative self-destruction model.

The second chapter, devoted to Stanislaw Lem's *Solaris*, examines the author's deep skepticism regarding the development of science given its expression of a seemingly inescapable anthropomorphism, a bias that makes the prospect of contact with alien life especially problematic. On a planet far from Earth, Lem's scientists are confronted with a radically alien other that interacts in an entirely inscrutable and disturbing manner: giving flesh and blood to traumatic fantasies and memories repressed by its human observers. Unable to ascribe compelling human motivations to the alien – a living ocean that makes a paradox of human ideas of life – the scientists fall into a series of violent responses and suicidal crises that reflect on Lem's nuclear warfare and post-Holocaust context. In this regard, the central character's most significant suicidal crisis provides a catalyst for a newfound existential perspective, one that ultimately feeds an existential project: an openness to further interaction with the ocean and the difficult self-analysis such would demand. Articulated in this manner, the creative response to the suicidal crisis in *Solaris* – the forward-looking existential project – may be distinguished from the model developed by Wells, where the found document carries the creative weight in its work of recovery and testimony.

The third chapter examines William Gibson's *Neuromancer*, a novel that taps anxieties surrounding humanity's status in a world shared with artificial intelligences; in particular, Gibson asks what habits of thought such intelligences might inherit from their makers. Gibson is invested in the possibility of fostering kinship between

humans and AIs, but sees propensities in humanity that might well subvert this goal. From early religion through cyberspace dreams of escaping the body, Western culture, for example, has often demonstrated disdain for bodily existence. Gibson's self-destructive hacker, Case, provides an opportunity to rethink this disdain; counterintuitively, his climactic suicidal crisis enables a new, embodiment-friendly kinship. Gibson's imagining of kinship also shapes the novel's formal experimentation; *Neuromancer* anticipates hyperlinking technology and engages readers in an emulated version so that they might participate, to some degree, in a new form of hybridized intelligence: specifically, readers practice a hypertextual construction of meaning, building on a convergence of digital (computer) and analog (human pattern recognition) memory. As modeled by Case, this cognitive shift requires a radical rebooting. However, the experience of reading *Neuromancer* also offers an alternative model of transformation, one of extended adaptation that would more gradually reshape cognitive habits toward the kinship Gibson envisions. Ultimately, *Neuromancer* modulates between these more radical and more gradual models of adaptation.

Chapter 4 analyzes two recent films, Christopher Nolan's *Inception* and Rian Johnson's *Looper*. Set in a world where dreams may be shared and strategically manipulated, *Inception* plays on anxieties regarding mind control and identity theft, anxieties that took a quantum leap with the development of cybernetics in the mid-twentieth century. Such concerns have only gained additional force as various emergent technologies have become intimately woven into most people's lives, making surveillance and coercion an increasing prospect. Specifically, the film walks a fine line in which it enacts and critiques what Mark Fisher has described as the commodification of the unconscious.[16] In this regard, Nolan manipulates postmodernist panic (anxieties regarding the prospect of manipulation) as he offers a critique of the narcissism and solipsism hailed by much popular culture.[17] In a twist on the creative self-destruction model, actively dreaming one's suicide in *Inception* is a means of exiting a dream state and returning to reality. Extending this notion, *Inception*'s suicide dreams provide a check for overwhelming

narcissism, a tendency the film locates both on the interpersonal level (among its characters) and in the mediascape it explicitly poaches. As regards the latter, *Inception* implicitly dialogues with various arguments regarding postmodernism and spectacle, including those that pose anxieties about pastiche and the presumed loss of historical legibility.[18] By contrast, *Looper* explores time travel through a dystopian vision of America's heartland (Kansas). Extrapolating from a variety of social trends shaping the context of the film's making, Johnson speculates upon increasing economic inequity, the dismantling of the social safety net, the militarization of civil society post-9/11, and a multiplication of international military conflicts with increasingly opaque rationales. In particular, the director announces with the film's climax – the suicide of its principal character, Young Joe – a deep interest in cycles of violence and narratives of origin. An assassin working for a crime syndicate, Young Joe spends much of the film trying to kill his older self who has come back in time to kill a child who may grow up to terrorize the crime syndicates and in the process kill Old Joe's wife. Most obviously, the film sets up an opposition between determinism (Old Joe, convinced the child could never be anything but the terrorist) and contingency (Young Joe, who believes that saving the child's mother by sacrificing his own life will provide an alternative path for the boy). Inasmuch as Johnson presents Young Joe as a version of the targeted child, the latter's survival, with his mother's continued care, promises a break with the dominant social patterns depicted in the film, patterns that Johnson strongly associates with the military entertainment complex.[19] Of the suicidal episodes examined thus far, only Young Joe's ends in his death, but even so, there is a creativity attached to the idea he dies for: the break with patterns of violence he explicitly announces before, and enacts with, his suicide.

Examining Margaret Atwood's *Maddaddam* trilogy, Chapter 5 argues that her post-apocalyptic vision presents an extended critique of Malthusian dynamics that played no small part in the development of the modern environmental movement. Set in a near future in which government has collapsed under influence of corporate greed, the trilogy depicts a world succumbing to failed human stewardship:

global warming, pollution, disease, and resource depletion combine to threaten all life on the planet. Caught in a self-destructive consumer culture, much of humanity lives in denial of this threat. An environmentalist and survivalist religious group, God's Gardeners, prepares for an apocalypse, while one scientific genius, Crake, bioengineers a plague that he hopes will wipe out humanity so it may be supplanted by an eco-friendly replacement of his own design. A steadfast critic of utopian models of change, Atwood directs attention to the Malthusian aspects of Crake's project, in the process satirically mobilizing arguments found in Paul Erlich's *The Population Bomb* and similar works.[20] Locating a particular destructive quality in the Malthusian approach, one that implicitly inspires Crake to take his own life as he "cleans the slate," Atwood suggests that humanity's survival depends foremost on its ability to adapt in less radical ways – that the complexity of the problems faced by humanity are such that utopian fixes do little more than guarantee a repetition of sacrificial and violent patterns. As such, Atwood's trilogy stands out for the way it evidences profound skepticism regarding creative self-destruction as a model of change. At the same time, her trilogy displays affinities to a number of the other works discussed, affinities regarding the value the artists confer on narrative as a means of working through social upheaval associated with science and technology: an approach that translates into consistent experimentation with narrative form and the reading habits this form invites. These historically disparate works all locate in narration a social impulse fueling wonder and learning, qualities that might identify humanity as adaptable when adaptation is most needed.

Regarding Method

Suicide and Contemporary Science Fiction does not offer a new theory of science fiction, nor does it provide a comprehensive history of the genre. Even its engagement of texts focused on suicidal transformations is selective. Nonetheless, the implications of this inquiry may be far reaching, in that the relative continuity of this model for

imaging change extends across various historical periods and diverse contexts. The readings pursued here assume that, to a degree, the texts undertake a productive and strategic dialogue with their historical contexts (as Suvin suggests), but they also remain attuned for the ways the works may animate sociohistorical dynamics beyond such self-conscious purposes. Although the texts are presumed to undertake a form of historically bound cultural work – a reflection on change in a particular context (Rose) – the interpretations also attend to their distinction as creative works, as speculations tapping the power of play.

Given that the primary texts compel engagements with a wide range of debates and concerns, the methodological investments of this study are likewise diverse. Fortunately, as Istvan Csicsery-Ronay has noted, science fiction criticism has achieved a depth and range that now makes it possible to pursue studies like mine while relying on an already established, varied, and robust critical discourse (*Seven Beauties*, 9). Science fiction criticism enjoys considerable depth in Marxist, semiological, postmodernist, feminist, queer, structuralist, film, media, Afrofuturist, psychoanalytic, and genre approaches (to name some of the most obvious), with important emerging work engaging trauma studies, disability studies, and eco-critical analyses.[21] In taking this approach, this study risks becoming methodologically scattered, but such seems a gamble worth taking for two principal reasons. First, the various iterations of the suicidal crisis examined here suggest this model of change has such persistence and power to capture the imagination as to warrant attention, as any model of regeneration through violence should. Further, its replication in a variety of contexts invites diverse methodological considerations. Second, the prospects for fundamental and accelerating science-related changes in our lifetimes are so strong, and the likely implications are so complex, that this work compels urgent, flexible attention. Driven in large part by exponential growth in computational power, science and technology are exploding in their capabilities, often with impacts that have only received serious consideration in science fiction. As Atwood has noted, narrative has played a crucial role as humanity has adapted to radical changes, and all of the artists

considered here invest greatly in this notion. They confirm that how we tell our stories has a great deal to do with how they turn out. As such, the fiction examined does not simply convey information (e.g., a warning regarding changes to be avoided or undertaken); instead, it enacts, and invites the audience's participation in, alternative means of creating ourselves, and our futures.

CHAPTER 1

Living to Wonder

Darwin, Evolution, and The Island of Doctor Moreau

The influence of H. G. Wells on subsequent science fiction has been profound, in part because his speculations anticipated scientific, technological, and related social developments that seemed, even to Wells, flights of fancy at the time of their publication.[1] In fact, he distinguished himself from Jules Verne by emphasizing exactly this point: according to Wells, Verne's stories were built around developments that were wholly conceivable, if not yet realized; by contrast, Wells envisioned himself straining credulity in terms of the leaps he asked of his audience.[2] Inclined to downplay his intellectual and literary achievements with his "science romances" – including *The Time Machine* (1895), *The Island of Doctor Moreau* (1896), *The Invisible Man* (1897), and *War of the Worlds* (1898) – Wells saw these works as preludes to his masterwork, a novel of significance, which in his estimation he was never able to produce.[3] His self-assessment suggests that he was unable to appreciate fully how his early training as a biologist prepared him for exploring some of the greatest social traumas of his day, and particularly the revolution that followed on the publication of Darwin's theories. Wells' schooling with Thomas Huxley – popularly known as "Darwin's bulldog" for his spirited defense of the theories – and Wells' immersion in debates regarding evolution provided him a unique vantage point as he pursued in his stories the social implications of these tumultuous developments. His explorations both recognized the self-abnegation inherent in new models of scientific progress and contemplated suicidal rebooting as a form of liberation from mechanistic predictability.

The Island of Doctor Moreau provides a uniquely rich example of Wells' efforts to analyze the difficulties attached to digesting Darwin during the Victorian era. Specifically, Wells' literary engagements with evolutionary theory suggest that the social and psychological responses to Darwin in Victorian England were so strong as to invite a form of radical mental rebooting: a form of extreme change that Wells captured in the figure of suicidal crisis. Further, such crises serve a transformative agenda because they provide a way of imagining a radical break with habits of thought and patterns of identity formation that appear inadequate in the post-Darwin landscape. Building on the work of George Levine, and especially his study *Dying to Know: Scientific Epistemology and Narrative in Victorian England*, I also suggest that Wells' turn to the dynamics of suicidal crises constitutes implicit recognition by Wells that a strong aspect of the scientific project post-1830 involved a deep-seated self-abnegation, an overriding mindset that associated the acquisition of objective, "real" knowledge with the demise of the subjective self (*Dying*, 1–2). Wells also had a personal interest in the ethics of suicide, and one goal of this chapter is to credit Wells for merging his personal reflections with his broader social analyses and insights.[4] The scientific propensity toward programmatic self-erasure has received treatment by many subsequent science fiction authors, and Wells' response and reformulation of this dynamic – suicidal crisis as a transformative model – in *The Island of Doctor Moreau* deserves recognition for its lasting impact. In this regard, Wells does something more than simply replicate the institutional logic identified by Levine. Specifically, Wells offers a model whereby the suicidal impulse is narrativized and incorporated into a plot that provides an alternative form of secular resurrection, or "rebooting." Such transformation is evidenced by the existence of Prendick's "found narrative" itself: its writing and dissemination highlights a narratorial agency that frames and interprets the events on the island, and this narratorial agency is especially noteworthy for the voice it provides the island's beast people, a voice that makes the novel a rich antecedent to animal studies and a profound challenge to notions of human exceptionalism.[5]

Chance and Change

H. G. Wells was born in 1866 to a devout Protestant mother, Sarah, and a freethinker father, Joseph. Beset by a series of financial difficulties that would culminate with the bankruptcy of the family-owned business, Wells' parents separated when he was fourteen years old so that his mother could assume residential employment as a well-positioned servant at Uppark, an affluent estate in West Sussex where she had worked before her marriage. The family's difficult economic situation compelled Wells' parents to place him in a series of apprenticeships, none of which lasted very long, in large part because Wells acted out when faced with intellectually stultifying and repetitive work. During this period, Wells received some limited schooling, including mentoring as a teacher's apprentice, and this training was sufficient to allow Wells to participate in nationally conducted standardized testing (a relatively new practice set in motion as England attempted to bolster its scientific prowess in the face of gains by other countries, including Germany). Wells' test results were outstanding, and on the strength of this performance, he won a scholarship to the Normal School of Science (now part of Imperial College in London), where he studied biology under Thomas Huxley.

As Gillian Beer notes, Darwin's deep emphasis on the role of randomness greatly troubled a good portion of the Victorian audience attempting to negotiate his theories, which were presented in volumes very much intended for consumption by the general reading public.[6] In this regard, Darwin relentlessly underscored the element of chance in natural selection, applying this not only to accidental mutations within species, but also to altering environmental conditions that would favor select mutations. Wells understood the implications of this randomness and exploited them in his science romances in ways that could both exacerbate anxieties and facilitate new ways of thinking. By foregrounding the possibility of humanity's devolution in *The Time Machine*, he played upon the former, but his sense of the latter potential was also quite strong, and was

confirmed by his own belief that Darwin's acknowledgment of nature's randomness promised a liberation from mechanistic conceptions of the universe (Sherborne, 59). Wells felt the limitations of such a universe quite keenly, especially when he lost his university scholarship (after receiving excellent marks in biology) because he did poorly in the physical sciences, including geology and chemistry. What bothered him most about the physical sciences was the fated, entirely predictable cause-and-effect vision of the world that grounded this area of study in the 1880s; by contrast, the biological sciences, as rewritten by Darwin and his cohort, presented a radically freeing horizon (Sherborne, 58–59). This world, premised on change, appealed greatly to the lower-class student as he broke new ground as a scholarship recipient, and as an aspiring academic in a culture whose traditional habits of thought reserved university education for members of the highly insulated upper class (Sherborne, 50–55).

Thanks to his mother's employment at Uppark, Wells from an early age had access to the estate's library and such rarities as a telescope, items that fired Wells' imagination. Having been exposed to such intellectual privilege, it was that much more difficult for Wells to accept the practical course that his parents set out for him when he was shipped off to the apprenticeships. In this regard, Wells likened work as a draper to crawling up a dark and endless pipe until one died, and by all accounts this description accurately reflected the helplessness he felt at the time.[7] Already inclined toward atheism, he found suicide as a response to such despair an option worthy of study; to this end, he read works treating the ethics of self-destruction, and a version of this interest crops up several years later when he tells an interviewer that Robert Burton's *Anatomy of Melancholy* is his favorite book in his library (Sherborne, 116). Wells' interest in suicide became an overt threat when his parents initially resisted a change of apprenticeship positions that Wells believed would give him a better chance at getting an education (Sherborne, 47). Although his parents argued that training as a draper would ultimately provide more economic security, they relented and granted his wish to apprentice as a teacher's assistant.

Although it is impossible to know the degree to which Wells' threat was rhetorical and the extent to which it represented a path he was ready to follow, it is noteworthy that this episode, in retrospect, could stand as a model for a self-destructive episode providing an opportunity for beneficial, if torturous, change. Of course, care should be taken not to infer too much from Well's biography: his texts remain so relevant and rewarding today in large part because they speak to broad social and cultural dynamics that resonate with his personal experience, but also extend well beyond it. In other words, much of the significance of his treatment of suicidal crises in the science romances is lost if it is reduced to an effect or recreation of Wells' own suicidal episode. Henry James appears to have hit the mark when he noted, not entirely appreciatively, that Wells' fiction relies deeply on the author's personal experience, but even if we grant this point, Wells also exhibited an uncanny sense of how upheavals in science and technology would reshape the social imagination for many decades to come.[8] These insights were strongly fed by his participation in a range of debates and nonfiction speculations, especially through his prolific early-career work as a science-oriented journalist. Along these lines, one finds language attributed to Wells' characters (for example, Moreau) that is lifted almost verbatim from the nonfiction essays published by Wells just prior to the circulation of his science romances. In sum, Wells' genius grew from his ability to draw fairly directly from his personal experience, including his journalism, while putting this "material" to wildly different literary uses with highly divergent implications.

Wells' first science romance, *The Time Machine*, offers an excellent example. With a framing device reminiscent of a Socratic dialogue, the novel presents a story within a story. The initial frame of reference involves the time traveler and a group of his guests, who gather in the "present" to hear and comment on the traveler's recounting of his journey into the future. Wells takes this opportunity to correct a misinterpretation regarding Darwin's theories (the mistaken assumption that human evolution demonstrates inevitable improvement), and in the process, he starts to chart suicidal crisis as a model of transformative change. In this

regard, Wells tackles a popular means of domesticating Darwin's theory: rewriting it with a teleological guarantee. This popular recasting of evolution supposed that Darwin's relentless random change led steadily to humanity's increasing superiority, its current exceptional state being the prime example of how survival of the fittest ensured ascent for civilization.[9] Darwin cautioned against this view, which he found problematic for its anthropomorphism, and during the period of Wells' science romance writing, he followed suit.[10] In this vein, *The Time Machine* may be read as a counter to the "domesticating" assimilation of Darwin. Although Wells became deeply invested in utopianism and social engineering later in his career, *The Time Machine* presents social engineering as anything but a beneficial progress.

In the novel, the traveler discovers that the theoretically ideal state of humanity encountered in the distant future is built on a horrific, sacrificial dependency, with the now subterranean working class, the Morlocks, having evolved to literally consume the intellectually elite but materially dependent Eloi. Reflecting on this cannibalistic relationship, the time traveler comments, "I grieved to think how brief the dream of the human intellect had been. It had committed suicide. It had set itself steadfastly toward comfort and ease, a balanced society with security and permanency as its watchword, it had attained its hopes – to come to this at last" (*Time Machine*, 78). In this passage, the single-minded pursuit of security and permanence constitutes a self-destructive response to the opportunity and responsibility afforded by Darwninian chance. Read through the lens of Wells' biography, this critique of tunnel vision recalls Wells' arguments with his parents regarding his apprenticeships (Sherborne, 46–47). For Wells, a life as a draper, however secure, would have constituted a living death, and his first science romance appears to model such a possibility in its vision of humanity's future. But Wells also offers another approach to suicide, one articulated when the time traveler offers the following speculation to his guests when describing the moments before his first use of the time machine: "I suppose a suicide who holds a pistol to his skull feels much the same wonder at what will come next as I felt then" (*Time*

Machine, 18). In this context, a rebooting of self provides new possibilities for life, new routes for living that are fed by inquiry, discovery, and the liberation from habits of thought and identity formation.

Wells' emphasis on wonder here is especially telling because of the way it offers an alternative to the dominant manner in which scientific study is being framed during the Victorian era. As Peter Galison argues in "Judgment Against Objectivity," during this period "the desired character of the natural philosopher inverted to one of self-abnegation" (329). Reflecting on Galison's argument, George Levine adds that for the nineteenth-century scientists,

> the responsibility to be "objective," to gain access to objects of knowledge and thus to allow facts to speak for themselves, took priority over fullness of understanding. Even interpretation, that is to say, violated for the nineteenth-century scientist the demands of moralized objectivity. Self-denial, a surrender of the self to the thing studied, became a priority of that time. (*Dying*, 3)

Examining the writings of a wide range of prominent Victorian scientists, Levine demonstrates a strong shared logic that yokes the acquisition of fixed knowledge to self-annihilation, or what the leading Victorian scientist John Tyndall termed "the sacrifice of the self, this upright determination to accept the truth, no matter how it might present itself, a process that would supposedly free the scientist of all bias and self-interest" (*Dying*, 4). This distinctively moral quest for objectivity in some sense filled the vacuum of authority created as religion's reading of the world was challenged or displaced, but as Levine emphasizes, this moralism is attached to a project that is profoundly paradoxical: How can one appreciate knowledge only fully gained at death (*Dying*, 2)? Levine does not at all advocate the shunning of paradox, at least as a viable point of departure.[11]

> While my argument throughout is that this suicidal narrative of knowledge is unsatisfactory and often dangerous and needs reimagining, I also want to insist that nineteenth-century aspirations toward knowledge were not merely, as they have been "exposed" as being, disguises of egoistic aggressions, reflections of surreptitious ideologies, disreputable programs

> of power, intimations of personal and culturally deep prejudices. The connection between knowledge and death, which I have turned into the metaphor of "dying to know," emerged precisely out of the reasonable efforts to avoid being those things. (*Dying*, 5–6)

Levine argues that this "reimagining" finds especially fertile ground in narratives, and particularly fictional works, that are typically well-suited for highlighting the dynamics of embodied knowledge and structures of feeling.[12] Levine's approach to the "dying to know" paradox offers a means of reframing Wells' description of his time traveler in the moments before he launches himself into the future. As is the case with the array of Victorian scientists studied by Levine, the time traveler understands his scientific endeavor as a sacrifice of self. However, the emphasis in Wells' passage falls not on the knowledge to be gained (or the power of that knowledge, as nature in itself, to overwhelm the human), but rather on the state of wonder experienced when the unquestioned anthropomorphic primacy of the self is suspended to some significant degree during a "rare moment."

Narration and the Imagination

As Philip Fisher argues, wonder constitutes a crucial aspect of the aesthetics that may be attributed to "rare experiences," although, as Fisher notes, the sublime has strongly tended to dominate such discussions in the modern era, that is, since Romanticism and the philosophy of Burke and Kant (*Wonder*, 1–2). Levine compellingly demonstrates the profoundly moralistic bent that infuses Victorian science (as noted, a means of reanimating values previously guarded by religious institutions), and Fisher offers something of a corollary as he describes the work of the sublime. In particular, he argues that the sublime "secularized religious feelings of the infinite and of the relative insignificance of human powers in an attractive way, allowing the modern intellectual to hold onto covert religious feelings under an aesthetic disguise" (*Wonder*, 2). As he undertakes this argument, Fisher draws on a robust critical genealogy when he defines the sublime as the aesthetization of fear (*Wonder*, 2). The sense of the Victorian scientist becoming radically overwhelmed by a

thoroughly ruthless, meaningless nature is, in fact, the flip side of the moralism Levine finds throughout the scientific writings: the moral effort gains in significance precisely because there is no safety net beneath it: the self is more thoroughly at risk.

By contrast, Fisher describes a wonder-oriented approach to rare experiences as the aesthetization of delight. Experiencing a radical change in worldview, Fisher's wondering subject engages an enlivening profusion (of knowledge, feeling, perception, and value), whereas the sublime subject would to some significant degree perceive a deadly threat to self (*Wonder*, 7–12). Both scenarios may be invoked as part of representations of suicidal crises (a delightful, freeing self-dispersal; a fearful destruction of the discrete individual), and the scenarios may well interfuse, with each shaping in various ways a subject's particular "rare experience."

Fisher's study aims to rescue wonder from critical underdevelopment, and one finds analogous efforts to elevate the role of wonder in Gillian Beer's and George Levine's works as they assess the cultural and intellectual impact of Darwin's theories. Undertaking a nuanced, rich analysis of Darwin's style in her study, *Darwin's Plots: Evolutionary Narrative in Darwin, George Eliot and Nineteenth-Century Fiction*, Beer argues that Darwin's manner of writing was very carefully fashioned and intertextually situated in order to convey the power of wonder (6–7, 58). The stakes are significant here, as Beer would point to this sense of wonder as a crucial aspect of how Darwin departs from precursors such as Malthus: where Malthus dwelled in anxieties regarding overpopulation, Darwin finds delight in nature's profusion (*Darwin's Plots*, 29). As Beer demonstrates, this delight, registered thematically and stylistically in Darwin's writing, appealed to scholars and critics such as Wells who saw in nature's profusion and relentless randomness a way out of the mechanistic, Newtonian view of the world (*Darwin's Plots*, 30–43).

Likewise, Levine's *Darwin Loves You: Natural Selection and the Re-enchantment of the World* argues that popular understandings regarding the theory of natural selection tend to displace a profound quality of secular wonder conveyed by Darwin's work (xiv–xvi). As a scholar invested in both literature and science, Wells was uniquely

positioned both to register and to reimagine reactions to the Darwinian revolution, and the profound shift in institutional authority that attended the rise of modern science. These efforts coalesced in *The Island of Doctor Moreau*, a novel that is distinct for the way it wrestles with the sublime and wonder-inspiring aspects of evolutionary theory.

The Island of Doctor Moreau begins with a fictional introduction supplied by the narrator's nephew, Charles Edward Prendick. This introduction offers information that might substantiate the ensuing story, but more importantly, it situates the narrative as a "found document." Discovered after Edward Prendick's death, the manuscript includes no instructions regarding its dissemination or publication. A type of stranded object, the manuscript's status suggests that it is a product, if not an agent, of trauma. Most obviously, the story conveys a series of traumatic episodes experienced by the recently deceased narrator: he suffers a shipwreck, a stranding at sea, a near descent into cannibalism, exposure to Moreau's experiments, prolonged isolation as the only surviving human among Moreau's beast people victims, and finally isolation at sea again as he flees the island in a small boat, this time with no desire for rescue. Prendick is subsequently found at sea for a second time, but immediately discovers that he must suppress his story by feigning amnesia because he would otherwise be declared insane. In other words, Prendick's narrative is itself so traumatic to its fictional audience that Prendick must deny it if he hopes to return to England and resume his life there. In this context, Prendick's story emerges as an uncanny return, a text marked by a social repression directed not toward his specific experiences, but rather toward the anxieties growing from Darwin's theories and the profound upheaval of social and scientific systems that they engendered. The introduction of the novel, therefore, implies a central question around which the novel is structured: What can we learn about the trauma and subsequent repression that makes this story abject in the society represented by Wells?

Many years after its writing, Wells described the novel as "an exercise in youthful blasphemy" (Parrinder and Philmus, 243). In this vein, *The Island of Doctor Moreau* demonstrates a strong debt to

Swiftian satire (to book four of *Gulliver's Travels*, in particular), as Wells invites readers to compare Moreau to God, and therefore, by implication, to question God's benevolence given Moreau's ruthless reveling in the suffering that defines Darwin's nature, at least as popularly understood at the time.[13] Wells' attitudes toward religion, which ranged from deep ambivalence to outright antagonism, are well documented, but there are other, more subtle dynamics at work in the novel as well, dynamics that might on further examination better account for the profound social repression presumed in the novel's introduction. In other words, we might ask what presumably made the found narrative especially abject as a version of blasphemy?

One strong tendency in the novel's critical reception focuses on the anxieties produced as Wells challenged human exceptionalism, humanity's progress as wholly distinct from developments in the animal kingdom.[14] At the same time, some of Darwin's followers trained focused attention on the possibility of devolution.[15] Various narratives and paintings of the period represented shipwrecked castaways reverting to cannibalism (a presumed animal behavior) and became lightening rod analogies for the potential devolution identified by Darwin.[16] Wells manipulates this anxiety in *The Island of Doctor Moreau* by referencing one of the most infamous historical examples of his day – the agonies suffered by the shipwrecked survivors of the French frigate *Meduse* in 1816 (an event that inspired Theodore Gericault's 1818–1819 painting, *The Raft of the Medusa*, an icon of French Romanticism). When Prendick arrives on Moreau's island, he carries the memory of having embraced cannibalism, in principle if not in execution; he is saved from the latter when his fellow shipwreck survivors fall overboard during a fight over who will eat whom (*Island*, 8). As such, the narrative marks Prendick as a traumatic example of devolutionary potential long before he is confronted by Moreau's experiments and philosophy.

Moreau's philosophy is perhaps the epitome of the "dying to know" logic identified by Levine, and is itself deeply dependent on repression. Moreau believes that his drastic self-amputation of feelings (especially empathy and sympathy), moral concerns, and

social interactions, will clear a path to selfless and unprecedented knowledge. In the larger economy of the story, this self-sacrificing of crucial aspects of his humanity makes Moreau a target of critique, but a decidedly complicated one. Elena Gomel, for example, suggests that the criticism directed at Moreau by the novel (and his role as an object of satire) effectively fails, a point that Gomel bolsters by noting the ways in which Prendick supposedly adopts Moreau's outlook, if not his project, after Moreau's death.[17] For Gomel, the stakes in this "continuity" are great because she finds in the representation of Moreau a blueprint for Doctor Mengele and the bio-empowered "new man" that informs twentieth-century fascist ideology. The problem identified by Gomel might be compared to the complicated reception of Milton's Satan: as an object of ostensible critique, Wells' Moreau, like Milton's Satan, is simply too engaging, and therefore invites readings and identifications with the character that drastically contradict Wells' apparent intentions.

As evocative as Gomel's argument is, it may undervalue actions taken by Prendick that reinforce his principled objections to Moreau's project and reasoning. For example, Prendick undertakes mercy killings of all of Moreau's ongoing experiments shortly after Moreau's death (105), actions that recall Prendick's early and essentially defiant mercy killing of the Leopard-man, who was slated for a return to Moreau's laboratory of pain after breaking the laws created to control the beast people (94). In addition, the Prendick who returns to England a thoroughly broken man is far from an endorsement of the new man program – in fact, he is evidence of the damage left in the program's wake (130–131). This is not to say that Gomel is incorrect in situating Moreau as a lodestar figure in the genealogy that leads to Doctor Mengele. However, Wells may deserve more credit for the critical context in which he presents Moreau, and for the complex interplay of narration and imagination conveyed by the novel.

Parsing out such "credit" is a complicated task, in part because many of the ideas attributed to Moreau were extensions and manipulations of positions very much in the air at the time of the novel's

writing. In fact, a portion of the speech in which Moreau explains his project to Prendick is copied almost verbatim from nonfiction science writing that Wells published in 1895, one year before the novel circulated. Specifically, Wells' essay, "The Limits of Individual Plasticity" (*Wells: Early Writings*, 36–39), takes as its point of departure a critique of heredity as it was invoked by social Darwinists:

> It often seems to be tacitly assumed that a living thing is at the utmost nothing more than the complete realization of its birth possibilities, and so heredity becomes confused with theological predestination. But, after all, the birth tendencies are only one set of factors in the making of a living creature. We overlook only too often the fact that a living being may also be regarded as raw material, as something plastic, something that may be shaped and altered. (*Wells: Early Writings*, 36)

Emphasizing that "[b]irth tendencies are only one set of factors in the making of the living creature," Wells argues that greater imaginative attention is due to the plasticity of the living being, its ability to be "shaped and altered," with possibilities "added and eliminated," so that "the organism as a whole [might be] developed far beyond its apparent possibilities" (36). Raising the prospect of plasticity is morally relevant according to Wells because he finds in modern society a strong tendency to cite the predictable hereditary component of natural selection and thereby ignore the available innovations that could be engaged to change substantially the course of individual lives. In this manner, Wells taps a long-standing element in the critique of eugenics, one that remains relevant a century later as Steven Jay Gould responds to *The Bell Curve* by Richard J. Herrnstein and Charles Murray.[18] Wells' essay goes on to describe an array of surgical interventions that might manipulate plasticity, with an emphasis on procedures that alter a being's developmental processes (*Wells: Early Writings*, 36–39). This language is reproduced almost exactly in the novel's chapter, "Doctor Moreau Explains," including claims that hypnosis might also reshape instinctual behavior. In sum, Wells uses a portion of his own nonfiction argument to define one of Moreau's obsessions: the plasticity of life. Crucially, this borrowing of language ends when Prendick presses two issues: Moreau's cruelty (not only

does he avoid anesthesia, he actually seeks ways to exacerbate his victim's pain, believing that suffering in itself is an "improving" catalyst), and his apparent lack of any justifying goal beyond his desire to test the plasticity of living forms. Moreau, in fact, presents his decision to humanize the animals as entirely happenstance, as if his agency was somehow just as bound to radical randomness as Darwin's nature (*Island*, 73). Turning back to Wells' essay, one finds no such valorization of pain whatsoever, and the prospect of manipulating plasticity is certainly not raised as an end in itself. In the economy of the essay, plasticity is instead invoked as a counterpoint to the overvaluation of heredity by eugenics advocates. Moreau's argument is pointedly not Wells', and in these instances, attending to context and narrative form are crucial for understanding the criticism Wells invites of Moreau.

Wells suggests that Moreau's approach to plasticity is a reaction, a kind of acting out, that is prompted by the decentering of humanity as religion's conceptions of the cosmos are displaced by science, and especially by Darwin. In this sense, Moreau's obsession with controlling the transformative power of pain marks his project as an attempt to do nature one better, to go blow for blow, if not further, when it comes to defining existence as strife and struggle. Moreau, then, is a character taking extreme actions, but actions that strongly reflect, and play on, cultural logics deeply impacting Victorian society. Prendick is, of course, a primary observer, not just of the experiments, but also of the thought processes behind them, and as such, he functions as a telling witness. On one level, this critical, filtering work is suggested by the very production of the stranded document that Prendick (the fictional author) leaves behind. The existence of this manuscript stands as an accomplishment worthy of consideration, especially given what we know of Prendick's mental disposition once he returns to England. More importantly, readers find in the narrative not only a critique of Moreau's project, but also the elaboration of other horizons of possibility, ones that come into view as Prendick attempts to digest his experiences. These possibilities are most apparent in the novel when Moreau's experiments (Prendick's companions in witnessing) "speak back." Before

examining this aspect of the work, it will be helpful to consider the nature of the critical filter that the narrator represents.

The Traumatized Narrator

A fiction offered as a found document posits a hypothetical author, and therefore invites readers to speculate about the agency (Wells) at work in constructing Prendick as a narrator. As a filter, Prendick receives a series of traumatic blows as he moves through the story, and his narration itself suggests a meta-commentary on these traumas and their negotiation. Particularly striking is the degree to which suicidal crises shape the narrator's reactions; other texts by Wells include suicidal dynamics, including the crisis at the climax of *The War of The Worlds*, but *The Island of Doctor Moreau* is distinct for the way it explores the transformative potential of such experiences. The first of Prendick's crises, the encounter with cannibalism, is described only briefly, but activates an especially loaded context, given the traumatic Victorian rethinking of the relationship between humans and animals. Early in the novel, as the narrator is conveying the deprivations of being lost at sea, Prendick describes the path to cannibalism. Noteworthy in this passage is the narrator's refusal to name cannibalism.

> The water ended on the fourth day, and we were already thinking strange things and saying them with our eyes; but it was, I think, the sixth day before Helmar gave voice to the thing we had all been thinking. I remember our voices were dry and thin, so that we bent towards one another and spared our words. I stood out against it with all my might, was rather for scuttling the boat and perishing together among the sharks that followed us; but when Helmar said that if his proposal was accepted we should have drink, the sailor came around to him.
>
> I would not draw lots however, and in the night the sailor whispered to Helmar again and again, and I sat in the bows with my clasp knife in my hand, though I doubt if I had the stuff in me to fight; and in the morning I agreed to Helmar's proposal, and we handed halfpence to find the odd man. (*Island*, 8–9)

Evidence of humanity's potential to devolve, the unnamable cannibalism marked a reality check that challenged attempts to read a

beneficent teleological progress into evolutionary theory. Striking in this passage is the narrators' sudden turn regarding his participation. His initial and apparently strong position – scuttling the boat and embracing death – reads as a means of precisely avoiding the devolutionary prospect. Knowing that he is vulnerable to an attack by the two other survivors might explain the reversal, but Prendick could presumably throw himself overboard, if his greater fear is involvement in cannibalism, willing or coerced. Instead, this passage suggests that the extreme experience of contemplating suicide may have opened opportunities for the narrator that he could not previously conceive as he attempted to react to the radical shifts in perception and environment. The experience of the suicidal crisis is, therefore, suggestively credited with having the ability to shift, or even displace, deeply ingrained habits of thought – threatening topics so loaded that they cannot be explicitly articulated.

The narrator's next suicidal crisis receives more elaborate attention as Prendick describes his discovery of Moreau's experiment on a puma, and his determination to avoid the same fate. Prendick mistakes the puma victim for a human being animalized, and in response, he flees Moreau, convinced that it would be better to end his life than risk bestial transformation at Moreau's hands. Twice while on the run, Prendick announces his intent to drown himself, a plan that he begins to execute as he wades into the ocean, even as Moreau and his assistant, Montgomery, try to convince him to stop. Prendick's ensuing exchange with Moreau convinces him that he is not in danger of being experimented on, but one of the most interesting elements of the chase and defusing of the situation comes early as Prendick appears to be captured by a sense of wonder directly associated with narrative. Fleeing and not yet facing Moreau, the narrator notes: "I had half a mind to drown myself then; but an odd wish to see the whole adventure out, a queer, impersonal, spectacular interest in myself, restrained me" (*Island*, 74). In contrast to the propensity toward "dying to know" infusing Victorian scientific and intellectual inquiry, here Wells pays tribute to a countervailing factor, a "living to wonder," or secular enchantment, as Levine argues the notion in *Darwin Loves You*. Prendick's is not a scenario in which the self is

abnegated; the narrator instead announces a "spectacular interest in myself," but this interest is also paradoxically "impersonal." This state of wonder is, therefore, credited with modulating between self and other, subjectivity and objectivity, in a manner that stands apart from the "dying to know" represented by Moreau and Victorian science generally considered by Levine. In fact, empathy, a key aspect of Moreau's humanness that he has rigorously amputated, appears to become a crucial motivator for Prendick's verbal attack on Moreau's project when he later confronts Moreau even as he stands ready to drown himself in the ocean.

Temporarily taking the beast people as animalized kin, Prendick calls on them to rise up against their creator:

> "You who listen," I cried, pointing now to Moreau and shouting past him to the Beast Men, – "You who listen! Do you not see these men still fear you, go in dread of you? Why, then, do you fear them? You are many – "
>
> "For God's sake," cried Montgomery, "stop that, Prendick."
>
> "Prendick!" cried Moreau . . . .
>
> I went on shouting, I scarcely remember what, – that Moreau and Montgomery could be killed, that they were not to be feared: that was the burden of what I put in the heads of the Beast People. (*Island*, 93–94)

As David Lodge has suggested, moments like this – the call for the beast people to rebel against a master who has tortured and abused them – may evidence a certain liberal guilt growing out of England's history of empire.[19] But as Sherryl Vint has argued, it is also important to consider the animals in Wells' text as animals, and not solely as allegories for racialized, colonized humans.[20] Although Prendick-as-character does not know at this point in the story that he is addressing humanized animals, he nonetheless expresses an empathy for these hybrid beings, and in the process he repeatedly attempts to undercut the fear used by Moreau and Montgomery to control the beast people and to maintain notions of human exceptionalism. Although one might suspect such, nothing in this passage or the surrounding text suggests that Prendick intends to escape Moreau or commit suicide by inciting the beast people. Instead, Prendick is described as "beside himself" during the spontaneous outburst, so much so that he cannot recall all that he said.

The implications of Prendick's speech are profound as the story unfolds, especially once Prendick finds himself alone among the beast people. Their entry into this radically altered environment begins with the loss of their creator when Moreau is killed while trying to capture the escaped and partially humanized puma: with abundant irony, the puma kills Moreau with her own fetters (*Island*, 105). Montgomery, utterly rudderless without Moreau's domineering influence, falls into deep despair and determines to have "a damned bank holiday tonight" given that "I'm bound to cut my throat to-morrow" (151). In effect, the holiday and suicide collapse into one, as Montgomery goes on a drinking binge with the beast people, a path that leads to conflict and death. Montgomery's final acts include destroying the only boats that Prendick might use to escape the island, albeit ones that would offer little promise of rescue given their fragility and the island's isolation.

The lone surviving human, Prendick spends the better part of a year on the island. Although he initially tries to install himself as a new master among the beast people in order to win some measure of self-protection, the efforts never gain any steam, and Prendick finds himself dependent on whatever alliances are available with some few of the beast people. In particular, Prendick reluctantly agrees to serve as the master of a saint-bernard-man who is apparently drawn to the relationship by instinct (*Island*, 118–119). The narrator repeatedly notes that his perceptions on the island shift as he continues to interact with the beast people. In this vein, his sense of the human form alters such that he can view their long torsos and short limbs as more normative than his bodily proportions, which become ungainly in his eyes. Along with this shift in perception, his time alone among the beast people is defined by intimacies that the narrator desperately wishes to repress: "There is much that sticks in my memory that I could write, – things that I would cheerfully give my right hand to forget" (171). He, nonetheless, acknowledges "how soon I fell in with these monsters' ways" (121), and how strange it is to remember the transformation, including the erosion of human exceptionalism.

The narration of this period is not simply truncated so that Wells might expeditiously move from the deaths to Prendick's escape from

the island. Instead, the narration alters such that it conveys the profound discomfort associated with the specific recollections. In particular, the narration becomes riddled with lacunae. So, for example, while describing "public outrages on the institution of monogamy" by the beast people during this period, the narrator abruptly terminates the discussion by simply announcing "I cannot pursue this disagreeable topic" (*Island*, 174). Observing the reversion to conventional animal behaviors also provides Prendick torment because it disturbingly recasts the more human relations he held with the beast people when he first arrived on the island: "how the quasi-human intimacy I had permitted myself with some of them in the first month of my loneliness became a shuddering horror to recall" (174). At the same time, Prendick notes complementary "strange changes" in his own demeanor, behavior, and appearance, alterations that appear to some degree permanent: "I am told that even now my eyes have a strange brightness, a swift alertness of movement" (175). Although the earlier portions of the story supply a surfeit of potential nightmare material, these are not the elements that most haunt Prendick when he returns to England. Instead, his greatest turmoil grows from his ongoing sense that the boundary between human and animal has dissolved (131). To this end, the part of the story that most haunts Prendick includes the time when he is left alone among Moreau's victims and finds himself assimilating to this situation.

The trauma of the boundary dissolution (strongly associated in the Victorian period with Darwin's work) helps explain the paradoxically suicidal posture Prendick strikes as he finally leaves the island. At first, Prendick is ecstatic to discover a sail on the horizon, but instead of being rescued, he encounters a small boat with two dead castaways, one of whom was the captain of the ship that rescued Prendick, then set him adrift again out of drunken spite (in the same dingy in which Prendick had endured his first terrible ordeal at sea). Far from the rescue he had envisioned, the arrival of the derelict boat marks an uncanny return, a reminder of the human capacity for cruelty. The narration of Prendick's departure from the island is noteworthy for its repeated declaration that Prendick preferred not to be found: "So I drifted for three days, eating and

drinking sparingly, and meditating upon all that had happened to me, – not desiring very greatly to see men again" (*Island*, 181). And then again shortly thereafter, the narrator announces, "It is strange, but I felt no desire to return to mankind. I was only glad to be quit of the foulness of the beast people" (181). Given Prendick's horrific and relatively recent experiences at sea, it is no small thing that he sets himself adrift yet again, and does so with no desire, let along expectation, of being rescued.

The gesture invites yet another engagement of suicidal crisis. The narrative provides the subsequent rescue the most bare treatment, and this economical description reanimates a crucial theme: Victorian society's inability to digest Prendick's narrative and the dissolution of human/animal boundaries that it enacts. Specifically, Prendick quickly understands that responses to his recounting will likely lead to his condemnation and so feigns amnesia to protect himself, but this pose does nothing to address the continuing effects of his experiences on the island. Back in England, he cannot adjust: "My trouble took the strangest form. I could not persuade myself that the men and women I met were not also another Beast People, animals half wrought into the outward image of human souls, and that they would presently begin to revert—to show first this bestial mark and then that" (*Island*, 182). Conceptually, the disruption of human exceptionalism has its most immediate roots in Darwin's evolutionary theory. However, where Darwin found a source of wonder, Prendick appears to find horror, a reaction that is profoundly shaped by the way Moreau tried to master and substitute himself for the version of nature he associated with Darwin. The antithesis of Daniel Defoe's *Robinson Crusoe*, Prendick returns to England not as proof of British civilization's superiority and endurance, but rather as an indicator of its precarity. Haunted by the dissolution of the animal/human boundary that he imagines whenever he encounters his countrymen, Prendick adopts a hermit's life, finding what solace he can in books and in the study of the more mechanistic physical laws associated with chemistry and astronomy.

This retreat from biology marks an intellectual path that is the opposite of what Wells himself pursued. For Wells, "the eternal laws

of matter" conveyed a fated, mechanistic world, a stark contrast to the messy but vital profusion Wells found in both biology and literature (Sherborne, 58–60). Although Prendick's retreat at the close of the novel is a coping mechanism, it is also a form of self-destructive amputation that marks Prendick as severely damaged. Specifically, Prendick sacrifices, or so he announces, engagement with "the daily cares and sins and troubles of men" (*Island*, 184), and in so doing he tries to save himself from feeling (especially empathy). He tries, in other words, to escape the various implications of his own, messily human, embodiment.

Retreat, however, is not the final word here. The conclusion of Wells' text is multi-layered, inasmuch as the narrative conveys conflicting drives. In particular, the production of the narrative, a process made a subject of the novel itself when Wells added the introduction and cast the manuscript as both found and uncanny, yields evidence that Prendick-the-author has not in fact completely given up engaging the "daily cares and sins and troubles of men." In other words, the story's status colors the reading experience, and alerts the audience to resistances and tensions pertinent to the fictional author and his society, and by extension to Wells and his context.

The Riddle of the Sphinx

As is the case with so many trauma narratives, readers are encouraged to seek out meaningful holes in the story as they work to analyze these tensions.[21] As noted, the narration regarding the period after Moreau's and Montgomery's deaths is strongly shaped by such resistances and tensions, and these reach something of a climax as Prendick attempts but fails to gain authority among the beast people. Revolver in hand, Prendick mimics Moreau, ordering the beast people in his vicinity to bow down and salute him. The most formidable of these interlocutors, a hyena-swine-man, refuses, answering Prendick with a snarl: "Who are _you_ that I should –" (*Island*, 161). The gap in the speech is consistent with the truncated style of narration in this section of the story. Presumably, the

unspoken words reference Prendick's effort to win supplication. If so, the unspoken element represents the human assumption of privilege over animals, a privilege challenged with the shift to Darwin's conceptual landscape. The spoken portion of the query carries special significance as well, inasmuch as it emphasizes the hybrid's ability to disrupt not only the boundary, but also the core assumptions regarding what constitutes the human.

In this regard, this pivotal scene recalls Oedipus confronted by the sphinx. According to Greek mythology, the sphinx posed a riddle to Oedipus, the answer of which was "man." In the standard version of the myth, Oedipus answers correctly and avoids being eaten by his inquisitor. Readers are invited to draw the association with the myth by virtue of Wells' implicit reference to Gustave Moreau, a well-known French symbolist painter whose most famous works include *Oedipus and the Sphynx* (1864), a painting that serves as a precursor for Prendick's confrontation with the hyena-swine-man. Moreau the painter was obsessed with a handful of themes, and returned to these frequently, so we have various treatments of the Oedipus/Sphynx interaction available for examination. Of particular note, "Moreau often depicted the sphinx victorious enthroned on a mound of corpses" (Pierre, 94). Examining the painter's most famous treatment of this subject, José Pierre comments that the work is distinct from those produced by other highly regarded artists (for example, Ingres) because it includes the full body of the sphinx in the center of the canvas, a blocking that suggests usurpation of human superiority and privilege (Pierre, 94). With claws already dug into Oedipus' chest, Moreau's sphinx appears ready to rewrite the myth, according to Pierre. If one grants that Wells has purposefully invoked this painting – a speculation that may be supported by the highly intertextual quality of the novel – we might appropriately conclude that Wells has referenced the victorious sphinx in order to frame his narrative as a challenge to human supremacy and exceptionalism.

To read the novel in this manner places a great deal of weight on a limited exchange between Prendick and the hyena-swine-man; however, it is noteworthy that this beast man is a source of terror

for Prendick for much of his time on the island, and in this vein, the terror may derive as much from what the beast man represents as any specific physical threat. On returning to England, Prendick is constantly haunted by an impression that the humans around him are animalized, but no similar horror is recorded about the humanizing of animals that Prendick encounters in England. The limited reflection regarding the hyena-swine-man's question may suggest that the question and its implications required, in Wells estimation, a certain containment: the humanized animal had the potential of making the boundary dissolution too traumatic, except in glimpses on an isolated island.

And if it is appropriate to make the painter Gustave Moreau a central factor in interpreting the novel, how might this assumption impact our larger understanding of Doctor Moreau and what he represents? The strongest points of comparison between the historical painter and the fictional character include self-designation as artists pursuing ideal forms, and adoption of projects they understood as religious. Doctor Moreau amputates his capacity for empathy so he can answer a higher calling that is expressed as he exploits plasticity in order to realize ideal human forms. This "artist's" failure to achieve his ideals is one component of Wells' criticism of Moreau's project, but the novel is not simply reactive, not simply a negation of Doctor Moreau. The hyena-swine-man's rebellious voice springs unintended from Moreau's experiments, and for all of the ways that Gustave Moreau's paintings glorify idealized and religiously loaded aspects of human kind, his art, too, unleashes powerfully disturbing voices – the victorious sphynx – from the animal/human borderlands.

CHAPTER 2

Stranded Contacts

The Transformative Potential of Grief in Stanislaw Lem's Solaris

Stanislaw Lem's *Solaris* expresses a deep skepticism regarding the development of science; in this vein, Lem announces particular concern regarding science's seemingly inescapable anthropomorphism. As with many of Lem's novels, *Solaris* suggests that this bias makes the prospect of human contact with alien life especially problematic, if not impossible. In fact, one could argue that Lem's investigation of this frustrated communication constitutes a defining feature of his science fiction. But as the truism goes, science fiction often presents alien worlds in order to undertake an inward journey, one involving an examination of humanness, including social dynamics and psychological processes. Lem's interest in contact fits this description inasmuch as the failures of communication with alien life set the stage for an analysis of the troubled human contact evident in Lem's fictional worlds (contact that is both interpersonal and intrapersonal, as in being in touch with oneself, or knowing oneself). As Lem surveys his experiences in occupied Poland (during WWII and the cold war), and as he considers the Holocaust, and the threat of nuclear war, he finds cycles of violent and ultimately self-destructive behavior that compel humanity to undertake a deep self-analysis (self-contact). In this regard, he posits in *Solaris* a defensive anthropomorphism that governs human behavior, a deep habit of thought and feeling that responds to the unknown with sublime fear and a relentless desire to control. Crucially, Lem suggests that these habits of thought thoroughly permeate human institutions, including those devoted to developing science and space exploration. In response, Lem presents extreme (limit) experiences – frustrated alien contact – and uses these speculative scenarios to comment on

dynamics of human communication and on knowledge creation across a wide range of contexts, but especially in scientific institutions. Because of the deep investments in defensive anthropomorphism, these moments when Lem places anthropomorphism under scrutiny are deeply traumatic for the characters who experience them. In works like *His Master's Voice*, but especially *Solaris*, Lem registers this trauma by offering characters who become suicidal when confronted by the limitations of the anthropomorphic mode. In what may seem like a counterintuitive move, Lem poses in these suicidal crises a possibility for release from the problematic fear and defensiveness: in other words, the passage through the prospect of self-destruction opens the possibility of replacing fear with wonder, for escaping destructive habits. Presented in this manner, Lem's characters suggest that certain suicidal experiences may function homeopathically. In yet another seemingly counterintuitive gesture, the way out of the trap of defensive, solipsistic humanness involves diving deeper into one's humanity: for Lem, a more "genuine" self-contact must proceed the existential discovery of an "authentic" life, which is itself the most promising prerequisite for embracing the unknown, including truly alien others. As difficult as the limit experience is for Lem's characters, the prospect of alien contact does hold the potential to act as a sort of transitional experience. Specifically, the encounter with alien life provides a mirror to humanity, one that may yield a certain critical distance; in this regard, the problem of alien contact offers an entry point to a discussion that is so loaded for humanity, it is difficult to address directly. In *Solaris*, then, aspects of the alien encounters function as deeply troubling catalysts for self-analysis, and, at their best, these challenges provoke a beneficial feedback effect (one that explicitly recalls Norbert Wiener's work on cybernetics, and implicitly invites comparison to Freudian analysis, and especially to his writings regarding the interpretation of dreams). Overall, Lem mobilizes the destabilizing attributes of grief in order to challenge a cultural logic of defensive anthropomorphism and to reshape communication (internal and interpersonal) and knowledge with the goal of encouraging an embrace of wonder, an outcome that for Lem carried

significant social and political weight. This forward-looking existential project (Kelvin choosing to remain on Solaris) may be distinguished from the version of the creative self-destruction model offered by Wells, where Prendick's document carries the creative weight, but primarily as a recuperative labor of recovery and testimony. At the same time, these works are united in their challenge to human exceptionalism, and in their fascination with wonder as an alternative to the aesthetics of the sublime.

Responding to Grief in Cold War Poland

A science fiction classic, *Solaris* has been translated into more than forty languages, and has enjoyed an especially strong circulation, with millions of copies sold worldwide.[1] *Solaris*' transportability across cultures owes a great deal to its representation of grief, and especially grief's power to destabilize those contending with loss. At the same time, Lem draws in various ways on his particular situation as he not only crafts ideas about grief's possibilities, but also develops a literary style that is shaped by his experiences in occupied Poland. Although *Solaris*' robust critical reception evidences a broad array of concerns (for example, genre studies, the history of science, religion and philosophy), most of these approaches have been inclined to treat Lem's seeming obsession with grief and suicide in the novel as a side note.[2] This tendency is odd given that even an elementary summary of the novel's action offers compelling evidence regarding the centrality of suicide in the work: in the distant future, a psychiatrist, Kelvin, arrives at an isolated space station and finds that one of its three resident scientists has recently committed suicide. The surviving crewmembers have adopted a defensive siege mentality in response to alien visitors who have been created by the sentient ocean of the planet they are orbiting. Kelvin is soon visited by one of these beings, who is modeled on his deceased wife who committed suicide years before. Although Kelvin tries to acknowledge, if only among the scientists, his visitor's status as a unique being, he cannot escape the drive to "domesticate" her, to treat her as if she were the original Rheya, a gesture that inevitably compels

Kelvin back into conflicted thoughts and emotions surrounding the suicide. Horrified by the suffering that her presence brings to Kelvin, the visitor makes an initial attempt at suicide, then subsequently succeeds in ending her life. Learning of his visitor's self-destruction, Kelvin attempts to kill himself, only to be stopped at the last minute. Three of the five suicides described in the novel are closely associated with the loss of a loved one: the "original" Rheya grieves her estranged husband (while simultaneously striking out at him for abandoning her); the "visitor" Rheya grieves her failed relationship with Kelvin, whose ambivalence toward her leaves him emotionally dead to her; and ultimately, Kelvin grieves the loss of his visitor. The two remaining suicides described with any detail – Gibarian and an earlier explorer, Sevada – both kill themselves in moments of despair, when it appears that a certain highly cathected idea (the prospect of meaningful alien contact) has been lost.[3] Although numerous scholars have asserted the enormously complex and perhaps insurmountable difficulties in ascertaining the motives that move individuals to suicide, in *Solaris* Lem appears intent upon associating such episodes, whether they result in death or not, with responses to loss.[4]

As the novel ends and Kelvin experiences a revelation of sorts (one prompted by physical contact with the ocean), the sense of suicide risk is displaced by a shift toward wonder. As noted, the overall economy of the narrative suggests that certain suicidal crises may be credited with a transformative and homeopathic power. However, Lem's novel also emphasizes that some experiences of grief may ultimately reinforce habitual, destructive drives. In this vein, the destabilization of some experiences may provoke a rebounding conservation of habitual responses, a retrenchment of the status quo in terms of anthropomorphic defensiveness. Lem records these conflicting possibilities in the struggles that ensue among the scientist-astronauts throughout the novel. Tellingly, these battles often focus on violent acts that would end the sentient ocean's activities, or destroy the planet altogether. When humanity's mission of intellectual colonization is called into question, the ensuing disturbance is shuttled into violent acts, or plans for the

same, against Solaris' ocean (27–28, 124).[5] For example, Kelvin participates in this reactive violence shortly after his visitor commits suicide and he survives his own suicidal episode. In this moment, he proposes to Snow that they call for a bombardment of the planet in retaliation for what Kelvin perceives as a psychological attack on the scientists (191). Kelvin's impulse passes, and by the end of the novel he announces what might be termed a new form of cosmic "negative capability," yet even this character, otherwise the most inclined among his colleagues to avoid harming the ocean or the visitors, is still subject to the type of violent outbursts that signal, for Lem, fissures in the human project. Overall, Lem offers in *Solaris* a cognitive and affective mapping of how the self-destructive patterns that compelled him to rethink humanity's prospects throughout his career might be transformed into a liveable future. The novel, therefore, invites readers to consider the specific articulations of self-destructive and especially suicidal behavior that shaped Lem's work.

Social reactions to suicide extend across a great range, and in this regard Georges Minois' *History of Suicide* is particularly instructive. In many of the contexts he examines, suicide is considered an affront to God and society, one that poses a broad threat to the established social order (Minois, 302). In others, it constitutes a moral failing and a more local defect of character or constitution (99–101). And under certain circumstances, suicide is not only accepted, but even considered heroic, particularly when it is viewed as an expression of liberty (234). The stakes of these acts, in terms of the normative values for given societies, are often reflected in ritualized responses to suicide; these responses run a spectrum from celebratory memorials to "after the fact" mock trials, even including such punishments as torture and "execution" of the suicide's corpse (304). Minois' *History*, in short, reinforces the notion that readers would do well to examine more closely the specific cultural and historical context of Lem's writing; such work may help readers better assess Lem's treatment of self-destructive impulses because the contextualizing allows one to recognize Lem's investment in particular debates and the politics of mourning.

Lem has done much to assist this cultural reconstruction through his own autobiographical writings and through one of his early novels, *Hospital of the Transfiguration*, a realist fiction set in Poland during WWII. Although Lem's family had earlier converted to Catholicism, their Jewish origins made them a potential target during the Nazi occupation of Poland, a period that included the deaths of approximately three million Polish Jews, or about 90 percent of the country's Jewish population (Niewyk, 421). Born in 1921, Lem grew up in the city of Lwów, and he revisits his prewar experiences in his memoir, *Highcastle* (1966), a work in which Lem devotes himself to recovering as directly as possible the memories of his childhood in pre-invasion Poland. What emerges is a portrait of a highly intelligent, spirited, and somewhat lonely youth who loved invention (a love expressed in the creation of fictional worlds and scientific designs/experiments). However, for all of his explicitly represented efforts to stay true to his childhood memories, Lem notes that he struggles with a cognitive dissonance as he undertakes the writing of the memoir (*Highcastle*, v–vi). He describes this disturbance as the result of trying to recapture the beauty of prewar Poland in the aftermath of the violence and death brought by the Nazis, a process that compels him to wrestle with the complexity and apparent autonomy of memory (146). In fact, references to this violence consistently surface throughout the work, oftentimes arriving as seemingly banal asides; in this vein, heartfelt descriptions of relatives and schoolmates frequently conclude with a terse acknowledgment of their deaths at the hands of the Nazis (69).

Although Lem describes encountering "Hitlerite Germans" some three years before the war (including displays of the latest Nazi weapons [*Highcastle*, 95]), the memoir anticipates the coming violence most explicitly as Lem describes the largely inadequate military training given to the young Polish men through their schools in the late 1930s. However ineffective, this training marks Lem's youth in a powerful way. Growing up, his most idyllic retreat was a ruined building referred to as Highcastle (58). Originally a monumental edifice packed with local history, this site served as an especially fertile playground for Lem and his childhood friends; it

was "a nirvana . . . not really a place, it was a state, so intensely perfect that it could be compared only with the first day of summer vacation – a day not yet touched . . . ." (59). This same Highcastle becomes a regular if unofficial firing range for Lem and his peers as the war approaches: a site strewn with spent bullet cartridges as Lem becomes an adept marksman (134). Locations such as Highcastle as well as many cherished objects described in the memoir carry a wondrous permanence (131–132), but what makes this longevity noteworthy for Lem is how the people associated with these places and objects can be lost to the Nazis; for Lem, such objects are orphaned, abandoned, and monstrously useless. Although Lem creates a masterful portrait of youthful creativity and a thriving society, the memoir is also consistently and inescapably a testament to the violent loss of this world (130–131).

Lem also explores in *Highcastle* the origins of his artistic impulses, and in particular, he devotes considerable attention to what might be termed his "bureaucratic imagination" (97–115). As a teen, he crafted elaborate institutional documents for imaginary and unnamed persons, including identification papers and authorizations of various kinds. Lem manufactured these realistic documents with great care, and likewise worked assiduously to conceal their existence (101). Lem emphasizes that these documents were not props for larger narratives: they were an end in themselves (108) and on some level satisfied a lust for realistic detail (101). This artistry, one origin of Lem's writerly self, involved building what he terms "a kingdom of universal permission" that would guarantee safe passage to their unnamed holders (105–107). Lem has not explicitly suggested that this compulsion to create an alternative bureaucracy was motivated by social and political changes in Europe, but given his precociousness, as well as the educational and professional status of his family members (his mother, father, and uncle were successful physicians), it seems likely that he would be exposed to news regarding the treatment of Jews and others targeted by the Third Reich in Germany. This prewar period saw Germany become a "genocidal state" in which every arm of Germany's advanced bureaucracy was being coordinated in the extermination process.[6] With restrictions to mobility and employment as well as

extensive forced sterilizations in place for targeted populations shortly after the Third Reich's acquisition of power in 1933, it is easy to imagine why a child in a family with Jewish roots might become obsessed with fashioning an alternative world, and specifically an alternate bureaucracy. Although it is ultimately impossible to know with any certainty what factors, conscious or otherwise, motivated Lem to pursue so compulsively and secretly his bureaucratic art, his experiences leading up to and during the occupation of Poland may well have played a role.[7] Lem remained in Poland with his family during the occupation, depending during this period on falsified papers that hid their Jewish roots (Lem, *Microworlds*, 4). Lem used his access to Nazi resources during this period to supply the Polish Resistance with weapons, while also using the opportunities that came his way to sabotage machinery; he also saw many friends and relatives being transported to the ghettos and concentration camps.

Lem's only realist novel, *Hospital of the Transfiguration*, builds on his occupation experiences, offering the perspective of a young doctor who takes up employment in a mental hospital shortly after the invasion of Poland, only to witness the "liquidation" of the patients at the hands of the Nazis. The novel's central character, Stefan Trzyniecki, aids the Polish Resistance in limited ways, and tries to hide his patients from the Nazis, but these efforts are minimally effective. More importantly, perhaps, is the way these actions and the values implied by them establish Stefan as an effective, empathetic witness. The novel concludes with Stefan and a fellow doctor escaping the massacre, and finally having sex in a scene that conveys an all-consuming species-level grief only weakly displaced by the personal intimacy (206–207). Like many trauma narratives, the novel refuses closure and instead invites, if not compels, the reader to return to the narrative as though haunted by it. The work is also exceptional for the ways that it explores a range of subject positions in relation to trauma specifically; in this regard, Lem is especially successful in representing collaborators, resisters, and bystanders in ways that nuance positions of social responsibility and anticipates the existential challenge embraced by Kelvin at the end of *Solaris*.[8]

In diving into this gray area between perpetrator and victim, Lem opens a window onto what Hannah Arendt termed the "banality of evil" and the bureaucratic matrix that helped make the Holocaust possible.[9] As part of this work, the novel also examines the impacts of the occupation on segments of the population not directly targeted by the "final solution." As Lem conveys, some parts of this population chose collaboration with the Nazis, some elected to resist, and others took advantage of exposed power lines to end their lives (*Hospital*, 115–116). In fact, self-destruction pervades the novel, both in these individual acts, and in the larger sense of humanity turning on itself. The novel's protagonist never contemplates suicide, and ultimately there is no indication in this work that a suicidal crisis could transform habits of thought. Instead, this realistic treatment of Poland during the war primarily bears witness. In some sense, then, the novel's very existence proclaims the defeat of the Nazi project, and it does so by giving voice to lives that were deemed abject, rather than by imagining a process of change represented within the narrative itself.

To explore this transformative dynamic wherein destructive habits of thought are effectively challenged, Lem would turn instead to science fiction, the artistic mode that became his primary focus for the remainder of his career. Although Lem wrote *Hospital of the Transfiguration* in 1948, its publication was delayed until 1955 because, as Lem has noted, "it did not conform to the already reigning standards of socialist realism" (*Microworlds*, 14). In the meantime, Lem published his first science fiction novel, *Astronauci* (*The Astronauts*), in 1951. Even though *The Astronauts* received a strong response from audiences, with many editions, translations, and a film adaptation as evidence of its success, Lem essentially disowned the novel as his career progressed, a posture he justified based on the naïveté of its utopianism, and its submission to Soviet ideology (*Microworlds*, 13). Accepting Lem's self-critique, it remains worth noting that many of the author's signature concerns were first presented in this text, including his fascination with "failed" alien contact. With all of its faults, *The Astronauts* also demonstrates Lem's continuing effort to examine the habits of thought that drive

humanity toward self-destruction. The creation and use of the atomic bomb at the end of World War II only heightened the urgency and stakes of this project, and whatever its successes and failures, *The Astronauts* is devoted precisely to engaging this problem. In this regard, the transition to science fiction provided Lem with an opportunity to engage with self-destruction in a different manner than he could achieve in more realistic narrative forms. Addressing the war's impact, Lem has noted that "those days have pulverized and exploded all narrative conventions that had previously been used in literature. The unfathomable futility of human life under the sway of mass murder cannot be conveyed by literary techniques in which individuals or small groups of persons form the core of the narrative . . . . I suppose – and this is a somewhat daring statement – that I began writing science fiction because it deals with human beings as a species" (*Microworlds*, 12).

Set in the "near future" of 2003, *The Astronauts* depicts a voyage to Venus that is prompted by the discovery of an artifact on Earth. This artifact, located at the crash site of a Venutian ship, includes plans to irradiate the Earth, then colonize it. In response to the discovery, an international group of scientists is dispatched to Venus where they find evidence of a warrior civilization that has destroyed itself in a nuclear civil war, even as it was preparing to attack Earth. Although Lem appears justified in describing the utopic representation of 2003 Earth as naïve, the urgency of addressing nuclear self-destruction as the cold war was gaining momentum makes the novel less easy to dismiss. The lesson conveyed by Lem's apocalyptic Venus carried weight with readers at the beginning of the nuclear age, with its governing policies of mutually assured destruction.

Rethinking Communication, Challenging Anthropomorphism

Lem credits his academic work with the Krakovian Circle with improving the quality and sophistication of his subsequent science

fiction, including *Solaris* (*Microworlds*, 16–18). This organization served as a clearinghouse for scientific literature produced in the United States and Canada, and Lem was tasked with reading the materials and disseminating them to the most appropriate researchers at Polish universities. Reflecting on this stage of his development, Lem notes that he read voraciously, and he highlights the impact of Norbert Wiener's study, *The Human Use of Human Beings* (1950), in particular (*Microworlds*, 16). In many respects, *Solaris* may be read as a companion piece to Wiener's book, which offers among other things an extended critique of scientific institutions that previews Lem's elaborate analysis of Solaris studies in his novel. Produced as a follow-up to his landmark study, *Cybernetics, or Control and Communication in the Animal and the Machine* (1947), *The Human Use of Human Beings* presents Wiener's concepts in a language made accessible for a lay audience. At the same time, Wiener uses the work to explore the social implications of technological change, especially as such pertains to communication. Wiener's thesis is that the operation of the living individual and the operation of some of the newer communication machines are precisely parallel, and he supports this proposition by arguing that both types of entities alter external information as they process it, and both alter their performance based on comparisons of their intended and actual actions; in this regard, these entities participate in the process of analyzing and acting on feedback information (Wiener, *Human Use*, 15–16). This notion of feedback appears to have deeply influenced Lem, who models his versions of authentic contact (including self-analysis and interpersonal relations) to emphasize a similar process. According to Wiener, "this complex of behavior is ignored by the average man, and in particular does not play the roles that it should in our habitual analysis of society" (15). Emphasizing the social import of this approach, Wiener argues that this understanding of agency, "this two way relation with the world," is denied by fascists and autocrats, people who "prefer an organization in which all the orders come from above and none return" (15–16). Underscoring this point, Wiener's book is opposed explicitly to this "denigration"

and "mechanization" of humanity (16, 58); a strikingly similar critique drives Lem's portrayal of scientific institutions in *Solaris*, a text that devotes considerable space to recounting the defensive drive of scientific bureaucracies to produce knowledge that reaffirms humanity's assumptions regarding its exceptionalism and its superiority.

A plea for democratization, Wiener's book also presents a loosely knit argument for developing an existential notion of responsibility, one that might break destructive habits of thought threatening "our now very tenuous opportunities for a considerable period of human survival" (*Human Use*, 16). The prospect of nuclear annihilation is taken up repeatedly in this text and, in Wiener's view, the agency embedded in the feedback approach to social relations offers humanity its best hope for changing self-destructive patterns: propensities that he associates with charismatic, power-hungry leaders (41, 138–142, 226–228). The stakes of the self-destructive threat escalated with World War II and the ensuing cold war, and the role of scientists and technicians in this transformation is an abiding theme of Wiener's study. Specifically, Wiener devotes considerable attention to the institutional dimensions of scientific research, to the regulation of this work by governments, and to the public's degree of informed engagement in science, with regard to both discovery and policies (57, 140–141, 216–218). Eleven years before President Eisenhower delivered his remarkable speech warning the U.S. public about the threat posed by the military industrial complex, Wiener argued that the institutions of scientific research were being altered in ways that anticipated Eisenhower's fears (124–125, 140–141). These concerns, of course, were also registered by Lem's fellow science fiction writers who saw in the cold war arms race a clear prospect for species suicide (e.g., Nevil Shute's 1957 novel *On the Beach*).

In a gesture previewing the isolation and paranoia of *Solaris*' space station, Wiener warns strongly against the secrecy and isolation reshaping scientific exchange, a chilling of communication that promised to inhibit not only discovery, but also debate about the social consequences of scientific work: "This demand for secrecy is

scarcely more than the wish of a sick civilization not to learn of the progress of its own disease. So long as we can continue to pretend that all is right with the world, we plug up our ears against the sound of 'Ancestral voices prophesying war'" (*Human Use*, 140). In addition, Wiener targets the increasingly proprietary nature of scientific and technological development, with the corresponding reliance on patents and corporate collaborations constituting a particular concern. In response to these trends, he offers impassioned support for open access to scientific knowledge, as well as for a deeper commitment by educational institutions to prepare the general public for participation in high stakes, science-related policy discussions. In this vein, he argues that instead of accepting its responsibilities in crucial scientific decisions, the general public has deferred to the "lords of present science," highly placed power brokers within research and governmental institutions, agents whom Wiener claims do not see the degree to which they have become imbued with "common sense" assumptions that are intrinsically destructive (57–58, 140–142, 189, 214). Strikingly, Wiener insists that the adoption of mutually assured destruction policies and the concomitant arms race are propelled by internally constructed enemies (141).

> The hurrying up, owing to our active simultaneous search for all means of attacking our enemies and of protecting ourselves, leads to ever-increasing demands for new research. For example, the concentrated effort of Oak Ridge and Los Alamos in time of war has made the question of the protection of the people of the United States, not only from the possible enemies employing an atomic bomb, but from the atomic radiation of our new industry, a thing which concerns us *now*. Had the war not occurred, it would probably not have concerned us for 20 years. In our present militaristic frame of mind, this has forced on us the problem of possible countermeasures to a new employment of these agencies on the part of an enemy. To a large extent, this enemy is not Russia, but the reflection of ourselves in a mirage. To defend ourselves against this phantom, we must look to new scientific measures, each more terrible than the last. There is no end to this apocalyptic spiral. (*Human Use*, 141)

Although Wiener places great value in the individual and in the diversity of feedback potential held by the general population, his

emphasis here is the agency wielded by large institutions, and by the communication patterns they sustain. A kindred spirit holding a privileged position between the United States and the Soviet bloc, Lem shifted his literary focus to science fiction in order to wrestle with such questions of humanity's self-destructive patterns of behavior. Like Wiener, Lem places great value in examining scientific advances and institutions because they increasingly either build upon, or resist, self-destructive propensities associated with defensive anthropomorphism.

The scientific secrecy and paranoia that deeply concerns Wiener is a point of focus for Lem as he speculatively examines the challenges posed when humans attempt to make contact with truly alien others. As Lem's works demonstrate, *Solaris* included, this dream of contact is paradoxical in the extreme. Defined by an unrelenting anthropomorphism, the mission of contact is, in Lem's view, a means for humanity to confirm its preexisting sense of purpose and accomplishment, self-referential benchmarks that make the project overall an exercise in solipsism (*Solaris*, 72). In *Solaris*, this state of affairs is sustained by precisely the kind of "top down" brokering of information targeted by Wiener. In this regard, Lem presents a future that has neither received nor acted upon Wiener's corrective. Instead, scientific institutions have tightly bureaucratized discovery and technological development. Humanity has avoided self-destruction, but the impulse toward mass violence has only been repressed into a social unconscious that threatens to unleash itself against "others" (aliens, nonconformists) in fits of acting out.

As dire as these speculative circumstances are in works such as *Solaris*, Lem does imagine prospects for breaking the habits of thought that portend violence in both Lem's cold war present and in his novel's settings. Specifically, Lem suggests that grief, as it drives both conscious and unconscious dynamics, might disrupt the cognitive and affective processes that limit how our environment is conventionally apprehended and engaged. These limitations are strongly in evidence as the novel begins. During the final leg of his voyage from Earth to Solaris, a panicky Kelvin fails to recognize both his launch toward, and his arrival at, Solaris (1–3). His belated

discoveries and the difficulties he has communicating with the Solaris space station underscore the degree to which he is subject to higher powers. Once on the station, he encounters a siege mentality among the two surviving team members. Gibarian's recent suicide might help explain the chaotic situation Kelvin discovers at the station; however, Snow and Sartorious are not simply in shock; in fact, both react to Kelvin in ways that suggest deep-seated paranoia. During his first human contact on the station, Kelvin expresses concern for Snow, who at this point suspects that Kelvin may be an alien visitor (6–7). Snow sarcastically rebuffs Kelvin's inquiries, suggesting that a show of sympathy is simply another form of manipulation, if not torture. Snow's words are packed with fear, but also with hatred and defiance, reactions prompted by Snow's sense of being manipulated by incomprehensible forces. Once Snow is convinced that Kelvin is a human and not a visitor sent by the ocean, he buys time before conveying the details of Gibarian's death. After suggesting that Kelvin settle in before discussing these matters further, Snow offers a cryptic warning:

> "If you should see anyone else – someone who isn't me or Sartorius, you understand, then . . . ."
>
> "Then what?"
>
> " . . . . In that case do nothing."
>
> "Who could I see?" I flared up. "A ghost?"
>
> "You think I am mad, of course. No, no, I'm not mad. I can't say anything more for the moment . . . ."
>
> "Don't be so mysterious. What's this all about?"
>
> "Keep a hold on yourself. Be prepared to meet . . . anything. It sounds impossible I know, but try. It's the only advice I can give you. I can't think of anything better." (*Solaris*, 10)

Deeply frustrated, Kelvin insists on receiving more information. Snow announces that the embodiment of the visitors depends on the beholder, and Kelvin asks if Snow is referring to "a polytherian form," adding "there's nothing human about them" (10). Snow completes his warning by accentuating Kelvin's assertion: "That's why they are so dangerous. Remember what I've told you and be on your guard" (11). This exchange merits close scrutiny because it

foreshadows communicative limitations that plague not simply the inhabitants of the station but also the history of Solaris studies, space exploration, and even science in general.

The initial exchange between Kelvin and Snow is striking both for what is said and what is not. Snow's first concern is defining the visitors as wholly nonhuman. While there are many ways in which their existence is distinct, the visitors are derived from human memories, and they exhibit a propensity to learn and develop independently: although the visitors originally manifest as embodiments of memories, they grow beyond their status as copies, forming increasingly autonomous selves. In other words, Snow's assertion regarding their utter lack of humanness is simply wrong. In fact, the threat and opportunity posed by the visitors lies precisely in their hybrid existence. Viewed in this light, they might be received as the embodiment of contact. Instead, Snow reacts as if a victim of the sublime.[10] Crucially, his preemptive move to compartmentalize the visitors' existence in this fashion denies recourse to wonder, giving priority instead to a manifest destiny of anthropomorphism.

Deeply disturbed by the news regarding Gibarian and by his own confusing reception at the station, Kelvin seeks solace in the archive of Solaris studies (15). As he undertakes this coping technique, one that reconnects him with the sense of wonder that drew him to Solaris studies as a child (25), readers learn that censorship and compartmentalization have in fact been a part of this scientific field of inquiry since its inception (22). Astronomical curiosity about the planet was first prompted not by its living ocean, but rather by its seemingly impossible orbit around two suns (15–17). This orbit so thoroughly disobeys the laws of physics that the planet was ultimately classified as the only known example of an "ontological autometamorph" (24). This status, however, is only conferred after a long period of bitter debate. In fact, the first scientists to collect empirical evidence regarding the planet's "law-breaking" orbit were soundly discredited, along with their equipment (17). It may be that Lem gave the novel its title (drawing attention to the suns, and not the ocean) precisely to underscore the ways that

scientific institutions can give precedence to habits of thought (assuming control of the orbit resides in the suns), even if this means ignoring wondrous discoveries (acknowledging that the planet manipulates its own orbit). Snow's reticence to provide Kelvin with more information about the visitors may reflect a similar priority. He knows that Kelvin's likely visitor will take a form that is difficult, if not impossible, to predict, and yet there are certainly many aspects of the visitors' behavior that he could convey, if he chose. Instead, Snow appears to fear the same sort of condemnation foisted upon the scientists who documented the anomalies with Solaris' orbit.

Something similar impacts Kelvin's behavior, although the conflict is internalized. Shortly after Kelvin learns that Gibarian committed suicide, he discovers a tape recording, the equivalent of a suicide note (30). Even though this tape could shed light on what happened to Gibarian, and could help Kelvin contend with his own extreme emotional and cognitive upheaval as he is "visited," he refuses to listen to the tape. Kelvin searches for clues everywhere, even following a cryptic allusion in Gibarian's scholarly notes, and yet he will not play the tape that would clarify what is happening on the station. Some of Kelvin's reticence may be attributed to his personal history with suicide, given that he blames himself for the death of his wife. As noted, this unabating grief and guilt reveal themselves through Kelvin's dreams, including one repeating, unchanging nightmare in which he is dying as though he had taken Rheya's place. At the same time, Kelvin's response to Gibarian's suicide reinforces a larger social pattern that Lem has forcefully represented in the novel.

In an interview, Lem encouraged readers to look beyond the psychology of individuals in his works and to grapple with larger social dynamics, a priority that led him to criticize the 2002 film version of *Solaris* for being too inclined toward Hollywood romance.[11] In particular, Lem, like Wiener, is concerned that institutional power dynamics supporting secrecy and censorship limit the pursuit of knowledge, if not encourage self-delusion. In *Solaris*, scientific accomplishments are tainted by a fundamental

anthropomorphism that requires considerable psychic work to counteract, and that threatens to unleash unbridled violence (both internally and externally directed) when challenged. This anthropomorphism is most explicitly articulated by Snow as he encourages Kelvin to wrestle more forcefully with the implications of the visitors, and the reactions they are prompting from the scientists.

> We take off into the cosmos, ready for anything: for solitude, for hardship, for exhaustion, death. Modesty forbids us to say so, but there are times when we think pretty well of ourselves. And yet, if we examine it more closely, our enthusiasm turns out to be all sham. We don't want to conquer the cosmos, we simply want to extend the boundaries of the Earth to the frontiers of the cosmos . . . . We think of ourselves as the knights of the holy contact. This is another lie. We are only seeking man. We have no need of other worlds. We need mirrors. We don't know what to do with other worlds. A single world, our own, suffices us; but we can't accept it for what it is. We're searching for an ideal image of our own world . . . . We arrive here as we are in reality, and when the page is turned and that reality is revealed to us – that part of our reality which we would prefer to pass over in silence – then we don't like it anymore. (72)

This extended analysis of the psychological motivations behind space exploration is prompted when Snow becomes frustrated with Kelvin's seeming refusal to grasp the alien origins of the visitors. Identifying repressed psychic material as the blueprints for the visitors, Snow credits the ocean with scanning the brains of the station's human inhabitants, and pursuing a kind of mental vivisection. Although the motives for this psychic examination and subsequent projection remain unclear, the repressed materials of interest to the ocean are both highly cathected and deeply compartmentalized, or encrypted.[12] In this regard, the ocean draws deeply on the unconscious dynamics, a focus that helps explain why it appears to scan the humans and produce the visitors during the sleeping hours of the human sources. At the same time, the intense repression of the source materials suggest that the ocean is particularly invested in analyzing the tensions between conscious and unconscious states. Snow captures this notion when he argues that

"there is something inside us which we don't like to face up to, from which we try to protect ourselves, but which nevertheless remains, since we don't leave Earth in a state of primal innocence" (72). As Snow suggests, demystifying the dream of space exploration risks a backlash. Solaris has the ability to deconstruct the fantasy of scientific progress, an operation which, according to Lem, is so loaded that humanity reacts to the ocean as though experiencing sublime terror.

This latent psychic charge helps explain why Kelvin initially insists on destroying the planet after his visitor has successfully ended her existence, but it also contextualizes the many other proposed and realized acts of violence directed toward the planet. For example, not long before Kelvin's arrival, Gibarian and Sartorious fired powerful X-rays into the ocean, an act that constitutes an overt violation of the laws governing space exploration (27–28). This violence is prompted by the ocean's failure to communicate in a manner that would satisfy the anthropomorphic dream of contact. In a similar example at an earlier stage of Solaris' exploration, an accident on the planet that claimed 106 lives provokes orders by the authorities governing space exploration to destroy the planet (124). This retaliation is effectively countermanded by a survivor of the disaster who threatens to destroy the space station and all of its remaining inhabitants if Solaris is targeted (124), a suicidal threat that challenges the dictates of defensive anthropomorphic control in order to give priority to wonder (a continued openness to unpredictable interactions with the ocean).

Catalysts for Internal Contact

Lem suggests that this pattern of extreme violent behavior could be modified with the self-analysis prompted by the ocean, and by the visitors specifically. Snow in fact gleans this possibility as he concludes his speech: "I'm talking about what we all wanted: contact with another civilization. Now we've got it! And we can observe, through a microscope, as it were, our own monstrous ugliness, our folly, our shame!" (72–73). The difficulty of this self-analysis is

signaled by Snow's ambivalence regarding the prospects for contact throughout the text; for the most part, he is unable or unwilling to credit the visitations as contact because their meaning does not conform to his notion of what contact should entail. Lem stresses that this is a failure with roots in the larger society: there are repeated indicators that the crew would be labeled insane were they to share their experiences on the station with the authorities. Such concerns lead Snow to speculate that Sartorius will try to expunge any reference to the visitors from the final report regarding the events on the station (192). In a related vein, Snow and Kelvin imagine themselves committed to an insane asylum on Earth if they attempt a truthful recounting (76).

It appears that Lem migrated to science fiction in part because the genre is well suited for presenting "stress tests" that unsparingly demonstrate those aspects of human communication that inhibit the open exchange that Lem and Wiener alike value so highly. As a means of emphasizing this value in the novel, Lem includes a story within a story that ultimately serves as a catalyst for Kelvin's development of something like Keats' "negative capability." Even though Gibarian left Kelvin with a detailed accounting of the visitors in the tape recording, he also left for Kelvin a reference to an arcane aspect of the exploration of Solaris. Guided by this prompt, Kelvin undertakes something like detective work in order to uncover a story that has been censored by the exploration authorities. Although it may be that Kelvin pursues this quest as a means of displacing the content of the tape recording, and especially the voice of his deceased mentor, the detective work also functions like a "talking cure," inasmuch as it allows Kelvin to come to certain difficult understandings via a series of associations and speculations that both soften the blow (of Gibarian's loss but also of the challenge to anthropomorphic assumptions). Through this process, Kelvin nurtures a sense of wonder as he slowly builds a new worldview.

This catalytic experience begins when Kelvin visits the space station's library, "hoping to find some sort of clue" (72). He discovers that Gibarian has checked out three books: *The Solarist Annual*, volume 1; its *Supplement*; and a collection of Solaris-related

ephemera, *The Little Apocrypha*. Gibarian has left a bookmark in the first of these, which leads Kelvin to an underlined name in the index: André Breton. Examining these works, Kelvin learns that Breton was a veteran pilot involved in a search-and-rescue mission on Solaris long before Kelvin's arrival. A fellow explorer had fallen into the ocean, and as Breton conducted his search, he encountered a series of objects and tableaux that suggested the ocean had scanned the fallen explorer's mind and recreated aspects of his memory, giving them material form in the substance of the ocean. Even more striking, it appears as if the ocean did not simply recreate these objects but also presented them to Breton with some unknown purpose, possibly related to psychic vivisection (87). These recreations include a gigantic simulation of a human baby, presumably a memory that the fallen explorer held unconsciously of his early infancy (81–88). This particular vision horrifies Breton as it appears that the ocean is testing the mechanics of the infant body by manipulating it through odd, puppet-like motions. Deeply shaken by his experience, Breton remains canny enough to anticipate the ways his full story might be dismissed by the authorities; here again, Lem demonstrates a concern for the ways that bureaucratic power upends open exchange (84).

Despite having an exemplary record as a pilot who has encountered a wealth of unusual phenomenon with poise, Breton is looked down upon because he is not a scientist (86). Instead, the board of inquiry reviewing the accident and Breton's observations dismiss his story as a hallucination produced by the ocean gasses (85). Having pleaded with the authorities to renew the exploration of Solaris in light of his experiences, Breton, distraught and deeply frustrated, refuses to offer a full recounting of his contact with the ocean (86–87). The one dissenting member of the board of inquiry, the aptly named Dr. Messenger, convinces Breton to share his full story with him, but Breton does so on the condition that the recounting remain confidential, a situation that Kelvin pieces together after examining *The Little Apocrypha*, which includes official and unofficial exchanges surrounding the inquiry. In particular, Kelvin encounters a fragment of a letter by Dr. Messenger

that explicitly speculates about the ocean's ability to conduct psychic dissections, and credits the ocean with undertaking a sustained project of recreating and experimenting with human existence (87). As was the case with the observers who identified Solaris' orbital anomaly, Breton is silenced. This evidence of contact is buried because acknowledging it could radically disrupt the anthropomorphic project that is presented in this novel as a matter of control and power, deeply shaping scientific institutions.

Breton's story of discovery and censorship serves as a crucial catalyst for Kelvin as he tries to accommodate not just the "return" of his deceased wife, Rheya, but also the larger implications of the ocean's contact. Among other things, the visitors are striking for their perseverance; for much of the novel, they appear indestructible. When harm is done to them, by the scientists or by their own hands, they heal instantly and completely. If the damage is severe enough, they resurrect, and if they are physically removed from the station (each scientists' first response to their appearance is to launch the visitors off of the station), they return as if reproduced anew the next time the human "memory donor" sleeps. Similarly, the visitors are compelled to stay in close proximity to their "donor" by forces they do not understand or control. These characteristics – perseverance and proximity – suggest a certain goal: the visitors appear to be designed to counter a deep-seated resistance by the humans to acknowledge their existence.

During one of the few simultaneous communications among the three scientists aboard the station, they struggle to identify the ocean's motives (99–105). Sartorius, the most officious but also the most secretive among them, dismisses the possibility that the visitations constitute an experiment by the ocean; specifically, he sees the ocean's failure to vary its stimuli (the resurrected visitors) in response to new information as a fatal flaw (103). It does not occur to Sartorius to speculate about the potential advantages of presenting consistent and inescapable stimuli to creatures stuck in habitual responses because he has not taken a self-critical look at what he presumes to be his scientific open-mindedness. The leader in finding a way to permanently destroy the visitors, Sartorius is the most

committed among the scientists to defining the visitors as a threat. This resistance, epitomized by Sartorius but evident in Snow and Kelvin as well, provides an argument for why the visitors might be designed with this "inescapable" aspect. Although Sartorius' claim regarding the lack of feedback processing by the ocean goes unchallenged during the video conference among the humans, both Snow and Kelvin observe crucial transformations in the visitors as they gain experience with the scientists (150–151). Snow is the first to remark explicitly about the visitors' growing independence of mind and development of emotion, but it is Kelvin who takes the implications of these changes most seriously; specifically, as he witnesses the autonomy gained by his visitor, he is deeply affected by her existential struggles (142–146). In this vein, she wrestles with her seemingly double consciousness: that part of her programmed from Kelvin's memories, and that part of her that is learning to become something new on the station while also maintaining some difficult-to-define connection with the ocean itself (144). However, Kelvin's admiration is also deeply checked by his own radical ambivalence toward his memory of his deceased wife.

Although the visitors are nearly inescapable and indestructible, they are, judging by Rheya's example, intensely dependent upon their origin/hosts, especially initially. They carry no memory of harms done to them during previous incarnations on the station, so with each arrival their human counterparts are granted a new opportunity to "manage" the situation, which often includes hiding their previous actions toward the visitors (69). All of the scientists have taken advantage of this mental resetting to establish a form of détente with the visitors. Initially, this accommodation requires playing along with the visitors' self-delusions: their perception of themselves as an original entity, and not a being derived from a memory or fantasy. Crucially, this scenario places the scientists in a position of complicity with the ocean. Kelvin's visitor ultimately discovers her situation, but only after she listens to Gibarian's tape, and has experiences challenging her original sense of self, including a "resurrection" after a suicide attempt (139–146). Meanwhile, Kelvin is drawn into a form of duplicity that is so thoroughgoing that it

evolves into a form of double consciousness. On the one hand, he at times dives so deeply into the fantasy of his wife's return that he becomes obsessed with the idea of recreating their life together, as it was on Earth. In this sense, the new Rheya represents something of a stranded wish fulfillment. It is unlikely that this Rheya would continue existing if removed from Solaris, and even if they could make the trip back to Earth, she would not be allowed to reside there because of immigration laws forbidding alien entry. Although Kelvin and his visitor talk repeatedly about resuming their life on Earth once she realizes her origins, these conversations constitute little more than comforting lies. Both know the truth, that she is not Kelvin's wife and that she will not venture to Earth, but they nonetheless withdraw into this mutual denial, except in rare moments of strength. She is more inclined to ask penetrating, reality-challenging questions, and to act on her knowledge: through self-destruction, but also by refashioning her identity.

Ultimately, Kelvin, too, is transformed in a manner that suggests a process of feedback. Whatever the intent of the ocean (and Lem has worked assiduously to keep its motive opaque), his visitor's characteristics compel a self-analysis by Kelvin. The scientists' complicity with the ocean also invites a degree of distancing from the wish fulfillment that the visitors themselves appear to represent. In a manner of speaking, the humans are put beside themselves, inasmuch as they are compelled to contend with, and analyze, the material projection of their own highly cathected memories and fantasies. For Sartorius, the situation holds nothing more than an extremely sublime absurdity, a threat to rationality that defines his notion of humanness. Although Snow joins Sartorius in building a device that apparently eradicates the visitors, he is deeply ambivalent about this project and argues repeatedly that the ocean presents a fundamentally important opportunity for humanity to learn more about itself (183–185, 192). Snow lacks a certain strength to engage the implications of this self-analysis – he wants to gain self-knowledge through contact but not when the contact too radically threatens human/alien boundaries; his wariness about trying to maintain conventional moral and ethical responses to the situation

plays an important role as Kelvin negotiates his own ambivalence toward the contact.

At the outset, Kelvin's reactions to his visitor vacillate dramatically. After jettisoning the initial incarnation, he largely collapses the resurrected version into the memory of his wife. This act of repression is exploded when he is reminded of the visitor's status by two identical dresses, each left in his quarters by a different incarnation (93). The vision of these identical dresses sends Kelvin into a truly horrific experience of the uncanny. Such are Kelvin's early and mostly ineffectual efforts to contend with his visitor's hybrid status. After her initial, "failed" suicide attempt, Kelvin modulates his approach to his visitor, striking a mental posture reminiscent of existentialism. Declaring their situation absurd, Kelvin advocates that he and his visitor work within their choices in order to stay together (145). He declares his love for the visitor and simultaneously attempts to eschew the larger quandaries attending their circumstances, including the larger implications of contact and the limits of anthropomorphism. This step into romance marks a failure to wrestle with the opportunities and responsibilities presented by the contact with the ocean, and Snow presses this point when Kelvin reveals his desire to pursue his relationship with the visitor, on Earth, if possible; specifically, Snow challenges Kelvin to shed his efforts to "normalize" the visitor as a human (151–155). Having shifted from the initial rejection of the visitor to a modified attachment to her that must contend with Snow's questions, Kelvin migrates toward the broader sociological questions that Lem highlights in his autobiographical writings when he describes his interest in science fiction. In the case of *Solaris*, Lem explores the ways that grief and attachment (empathy, emotion, affect) might be reworked in the process of rebooting humanness, a rebooting that might carry humanity away from self-destructive patterns.

The possibilities for such a rebooting increase as Kelvin's contact with the visitor compels him to wrestle with the limits inherent in his attempts to normalize their relationship through romance. This difficult mental and emotional processing leads to two levels of communication among Kelvin, Rheya, and the ocean. On one

level, Kelvin and his visitor engage in superficial and nostalgic fantasies (a return to Earth) that free them from dealing with her alien origins. On a different level, Kelvin undertakes a more direct form of contact with the ocean through his dreams. In other words, a part of Kelvin retreats into predictable habits of thought even as another part of him gains ground in terms of adapting to the implications of the contact. The former pretense evolves into a "state of mindless suspension," that feels to Kelvin increasingly fragile and insubstantial, "as if the slightest alteration could shatter the perilous equilibrium and bring down ruin" (178). Noting that his visitor had the same sense, Kelvin conjectures that an invisible presence made itself felt everywhere on the station, and particularly during Kelvin's dreams, when it provoked an incommunicable horror (178). Lem suggests with Kelvin's horrific dream passages that these semiconscious states allow greater opportunities for exchange because habits of thought and processes of repression hold less sway.

In an attempt to analyze his dreams, Kelvin transcribes them, giving extended attention to one in particular. In this dream, Kelvin appears to merge to some significant degree with the ocean, a process that includes a perceptual acuity supporting the ontological authenticity of the scene. The setting of the dream is

> [a] blurred region, in the heart of the vastness, far from earth and heaven, with no ground underfoot . . . . I am the prisoner of an alien matter and my body is clothed in a dead, formless substance – or rather I have no body, I *am* the alien matter . . . . The conviction of its substantial, tangible reality is now so overwhelming that later, when I wake up, I have the impression that I have just left the state of true reception, and everything I see after opening my eyes seems hazy and unreal. (178–179)

Kelvin further conveys the sense that something is awaiting his consent, a temptation that portends a terrible outcome. At the same time, this knowledge of threat is described as independent of him, existing beyond his individual consciousness, as if it constituted an assumption working at the species level, perhaps a defense of anthropomorphism itself. Despite the impending possibility of a terrible

outcome registered from without, Kelvin notes that the scenario provoked no fear in him whatsoever. This response suggests that Kelvin has been prepared for this dream contact through his experiences with the visitors, and the queries these experiences have compelled. Specifically, he has been prompted to reconsider the sense of wonder that functions as an effective alternative to the sublime. In fact, Kelvin's seeming obsession with the archive of Solaris studies throughout the novel provides him with a means of recovering the wonder that first drew him to the field. For all that the novel's treatment of Solaris studies demonstrates about the limits of institutionalized science, Kelvin's response to the spirit of this science suggests that he may hold a privileged position compared with the other scientists, and in particular a potential to conceive of contact anew: measured not as the transfer of discrete, transparent knowledge, but rather as a feedback process itself wherein an entity, Kelvin, is transformed through interactions.

The dream exchange that ensues with the ocean involves a series of profound shifts in consciousness and identity that deserve recounting as a whole:

> Out of the enveloping pink mist, an invisible object emerges, and touches me. Inert, locked in the alien matter that encloses me, I can neither retreat nor turn away, and still I am being touched, my prison is being probed, and I feel this contact like a hand, and the hand recreates me. Until now, I thought I saw, but had no eyes: now I have eyes! Under the caress of the hesitant fingers, my lips and cheeks emerge from the void, and as the caress goes further I have a face, breath stirs in my chest – I exist. And recreated, I in my turn create: a face appears before me that I have never seen until now, at once mysterious and known. I strain to meet its gaze, but I cannot impose any direction on my own, and we discover one another mutually, beyond any effort of will, in an absorbed silence. I have become alive again, and I feel as if there is no limitation on my powers. This creature – a woman? – stays near me, and we are motionless. The beat of our hearts combines, and all at once, out of the surrounding void where nothing exists or can exist, steals a presence of indefinable, unimaginable cruelty. The caress that created us and which wrapped us in a golden cloak becomes the crawling of innumerable fingers. Our white naked bodies dissolve into a swarm of black creeping things, and I am – we are – a mass of

> glutinous coiling worms, endless, and in that infinity, no, I am infinite, and I howl soundlessly, begging for death and for an end. But simultaneously I am dispersed in all directions, and my grief expands into a suffering more acute than any waking state, a pervasive, scattered pain piercing the distant blacks and reds, hard as rock and ever-increasing, a mountain of grief visible in the dazzling light of another world. (179–180)

Initially, Kelvin's consciousness is seemingly embodied by the ocean in a detached state of expectation. The ocean then appears to extend its earlier modeling of human forms (the episode described by Breton, the creation of the visitors) by taking Kelvin, as a conscious subject, through his own recreation. The scenario suggests several things about the state of humanity. For example, Kelvin does not consider his existence fully realized until he is given an embodied, recognizable form. His identity is phenomenologically informed, and this tethering to embodiment undermines conventional assumptions regarding the division of mind and body (identified with Descartes), assumptions that were crucial in elevating the rational self above the emotional.[13] As such, this vision of human existence constitutes a rebuke of Sartorius' position, the goal of which is to purge emotion and the messy implications of the unconscious. This embodied sense of identity is further confirmed as the ocean-formed Kelvin creates another human form, a process in which touch plays a fundamental role. The difficulty Kelvin has in identifying this new entity may point to a greater disengagement by him from the romantic habits of thought that frequently provide him a means of denying his visitor's hybrid status. In other words, the dream appears to herald something of a breakthrough in terms of both Kelvin's ability to imagine truly alien others, and the challenges this imaginative leap poses for human self-conception.

The end of the dream provocatively underscores this latter point. As comforting, even empowering, as Kelvin's creation of a human-like form may be, it stands in stark contrast to the ocean's existence, which confounds the comfortable limits of human embodiment and entails a radical dispersal of consciousness, seemingly across the whole of the ocean. The grief that accompanies the dispersal of the

human form conveys something very powerful about human vulnerability, a quality of human existence apparently unknown or new to the ocean, given that it may have no comparable experience with, or conception of, death. To the extent that the dream holds a mirror up to human existence, it reveals that grief constitutes a fundamental aspect of what humans are. In the dream, the dispersal of the human is associated with "a presence of indefinable, unimaginable cruelty," a force that does not simply eliminate the bodies, but rather dissolves them into "a mass of glutinous coiling worms" (180). As horrific as this vision of death and decay is for Kelvin, there is also a suggestion in the final lines of the novel that the force described here transcends morality, and that it represents, in fact, a "cruel miracle," and possibly some crucial new awareness.

Grief, Cold War Politics, and Wonder

This transformative grief bears comparison to Judith Butler's argument in *Precarious Life*, and especially the second chapter of that work, "Violence, Mourning, Politics." Here, Butler argues that the potential for political coalition exists in humanity's shared vulnerability to loss (49). For Butler, loss and vulnerability cannot be separated from the human individual's socially constituted embodiment: human identity is, in this view, radically dependent on the attachments individuals make with one another, and the human condition entails the risk of losing these attachments, and the work such loss carries with it (20). Butler also suggests that contending with grief involves a certain submission to a process that transforms the griever, and in ways that are fundamentally unpredictable (21). In support of this approach, Butler cites Freud, who notes that "when we lose someone, we do not always know what it is *in* that person that has been lost" (21). Mourning, therefore, involves an "experience of not knowing incited by losing what we cannot fully fathom" (22). This experience of wrestling with an enigmatic alien within (the complex meaning of losses from the survivor's perspective) offers a means of contextualizing Lem's long-standing fascination with seemingly unknowable aliens,

and with the self-destructive responses undertaken by his protagonists when they are faced with "stranded contacts."[14] In *Solaris*, Lem extends his exploration of mourning and vulnerability, initially undertaken in *Hospital of the Transfiguration*, carrying this work from realist to science fiction, a shift that allowed Lem to write in a more allegorical mode during a period of potentially intrusive editorial oversight and censorship. Unlike *Hospital of the Transfiguration*, *Solaris* includes only coded references to Lem's historical situation. But this fact belies the political import of the novel, an investment reinforced as Lem identifies Wiener's book – devoted to the social and political significance of cybernetics – as a signal inspiration. Drawing out the connection, it appears that Lem embraced the notion that a feedback-oriented approach to communication holds deep political implications; Lem adds a crucial dimension to Wiener's work by asking how loss, grief, and mourning entail another fundamental mode comparable to feedback. Such a mode has transformative possibilities for those who open themselves to the process, as Kelvin, prepared by his dream contact, appears to do at the end of the novel. Lem has connected the transformative aspects of Wiener's feedback theory (built on the notion that information processing changes, and confers agency on, the processor) to a Butler-esque understanding of grief's potential, in order to speculate about the prospect of breaking from deeply ingrained thought patterns: habits that appear to lock humanity into cycles of warfare and violence that threaten global destruction.

Butler explores a similar possibility at the close of her chapter when she suggests that the shared experience of loss, mourning, and vulnerability might serve as the foundation for political coalition building across diverse cultures (*Precarious Life*, 49). Butler does not explicitly identify existing political efforts (e.g., the human rights movement or the United Nations) as entities that might be reformed or replaced by such a project, but her proposal recognizes value in transnational and transcultural cooperation in mitigating violence. Although *Solaris* devotes little explicit attention to the governmental politics of its imagined future, Lem does invoke the United Nations early in the novel in connection with the

massive x-ray bombardment of the ocean undertaken by Gibarian and Sartorius. Specifically, Kelvin notes that this violation of the United Nation's conventions could not have been supported by anyone beyond the space station (*Solaris*, 27–28). Although humanity is credited with surviving the cold war and the era of mutually assured destruction, Lem's future world is marked nonetheless by certain problematic continuities from the post–WWII period that saw the creation and expansion of the United Nations. In particular, humanity remains strongly marked by an ongoing, self-destructive drive that pervades the novel's suicidal ethos. However, aspects of *Solaris* suggest that change is possible. In this regard, the characters' confrontations with loss throughout the novel constitute a fertile ground for change, as Butler's work suggests; also, as noted, Lem foregrounds grief both to underscore its profoundly important role in shaping humanity, and to provide a sense of the complex (not necessarily conscious) psychological processes that shape communication.

This political import of the novel is reinforced in a way that allegorizes the international debates regarding human rights that were taking place during *Solaris*' production. An alien taking the form of a radically collective entity threatening to absorb human individuality is a stock form in cold war science fiction, especially in the West. Looking beyond this more conventional political reference, one also finds in Kelvin's dream episode something of the tensions that were shaping the postwar human rights movement as it attempted to develop beyond the nonbinding mode of declarations into the more legally weighty terrain of international covenants. The struggle to craft and pass these covenants provided an international venue for intense ideological battles, noteworthy among them the clash between Western emphasis on individual liberties and Soviet bloc's commitment to prioritizing the collective good and shared responsibilities. Kelvin's dream invokes these conflicts in the tensions it describes between the autonomous and the dispersed, collective subject; he is also so shaken by them that he can initially do little more than register them as experiences provoking radically ambivalent responses (178).

As challenging as Kelvin's dreams are, his effort to record them and to begin the work of analyzing them suggests at least the beginning of an engagement with wonder. He does not simply try to catalogue the dreams and their features, thereby gaining some measure of control. Instead, he attempts to unpack what is difficult in them, drawing on whatever negative capability he can muster. His analysis does not reshape him in time to alter significantly how he interacts with his visitor, but it does help prepare Kelvin for his eventual decision to remain on the space station. This turn in his thinking comes as Kelvin visits the surface of Solaris. From the outset, a sense of belated discovery marks his trip; having originally intended to inspect one of the landlike formations, he realizes upon arriving that his deeper wish is to encounter the ocean itself (202). He then undertakes an almost ritual interaction with the ocean, one documented by numerous explorers before him.

> What followed was a faithful reproduction of a phenomenon which had been analyzed a century before: the wave hesitated, recoiled, then enveloped my hand without touching it, so that a thin covering of "air" separated my glove inside the cavity which had been fluid a moment previously and now had a fleshy consistency. I raised my hand slowly, and the wave, or rather an outcrop of the wave, rose at the same time, enfolding my hand in the translucent cyst with greenish reflections. I stood up, so as to raise my hand still higher, and the gelatinous substance stretched like a rope, but did not break. The main body of the wave remained motionless on the shore, surrounding my feet without touching them, like some strange beast patiently waiting for the experiment to finish. The flower had grown out of the ocean, and its calyx was molded to my fingers. I stepped back. The stem trembled, stirred uncertainly and fell back into the wave, which gathered it and receded. I repeated the game several times, until – as the first experimenters have observed – a wave arrived which avoided me indifferently as if bored with the too familiar sensation. I knew that to revive the curiosity of the ocean, I would have to wait several hours . . . . Although I had read numerous accounts of it, none of them had prepared me for the experience as I had lived it, and I felt somehow changed. (203)

Lem is careful to avoid ascribing human qualities to the ocean, and he implicitly reminds readers of this opacity of contact with the layer of air that separates Kelvin's hand from the ocean. Yet this scene also

suggests that the ocean is moved by a sense of wonder that takes time to rekindle once overexploited. Kelvin knew about this phenomenon before his journey to the planet, and its belated recollection culminates a recovery of wonder that Kelvin began pursuing, although seemingly inadvertently, as soon as he first encountered the chaos at the station at the beginning of the novel. Throughout, Kelvin's almost obsessive reiteration of Solaris studies provides many opportunities to critique institutionalized science, but, crucially, it also offers a chance for him to reconnect with that "thrill of wonder which had so often gripped me, and which I had felt as a schoolboy on learning of the existence of Solaris for the first time" (25). Although such experiences of wonder can fuel a degree of escapism in *Solaris*, Lem most strongly juxtaposes it to a sense of the sublime, where fear and a desire for control frequently drive Kelvin and his peers toward violent and self-destructive acts.

Kelvin is guided toward a new sense of wonder through the visitations, and by his visitor in particular, but ultimately his visitor poses as many limits as aids to his self-analysis and to his ability to comprehend the implications of the ocean's contact. In this regard, Kelvin becomes mired in a nostalgia that blocks his acknowledgment of his visitor as a hybrid being. As a consequence, Lem establishes a narrative economy that appears to make her self-sacrifice a precondition of his "rebooting": the narrative's overall structure suggests that she must kill herself so that he can, in turn, go through a transformative suicidal episode. Her suicide note implicitly declares this function, foreseeing as it does his wish to follow her example. In sum, Kelvin's transformation at the end of the novel is purchased by the apparent containment of his visitor: the embodiment of a wholly alien form of life, one that raises profound questions. In one sense, then, the visitor's suicide might be viewed as a transitional moment in Kelvin's, and humanity's, "education." Viewed in this light, her elimination would clear the way for a more complex and nuanced sociological analysis, and a greater critical distance from the limitations of anthropomorphism, because Kelvin is allowed some relief from his particular grief, nostalgia, and romantic escapism. On the other hand, the visitor's

sacrifice might also reenact the very self-destructive drive that this "education" targets. The same ambiguity applies to Kelvin's suicidal episode: Can the self-destructive pattern of behavior be effectively critiqued and rethought by a narrative that makes reenactment of the suicide drive a presupposition for change? Ultimately, the novel's conclusion may suggest that *certain* suicidal experiences act in a homeopathic fashion, in some sense preparing humanity for a change of course. However, in *Solaris* this homeopathic logic is purchased at the expense of the visitors: beings that embody not just contact, but also a profound unmaking of the anthropomorphic boundary.

CHAPTER 3

Stealing Kinship

Neuromancer *and Artificial Intelligence*

A chorus of scientists, engineers, and scholars specializing in emergent technologies confirms that exponential accelerations, especially in computer processing power, are leading humanity into a period of unprecedented, even revolutionary transformation.[1] With a noteworthy consistency, the participants in this discussion reiterate the basic assumptions underlying Joel Garreau's "radical evolution" thesis in which ongoing developments in genetics, nanotechnology, and robotics combine to alter humanness in profound ways, and with a rapidity that is simply dazzling.[2] At least for the populations who are able to reap the benefits of these advances, health, intelligence, and longevity are likely to improve in ways that will outstrip even our most optimistic predictions. As part of this process, technological enhancements will extend human capabilities so fundamentally as to redefine existing understandings of identity, communication, embodiment, and consciousness. One of the most optimistic and widely read of these commentators, Ray Kurzweil, predicts the advent of artificial intelligence (AI) by the year 2029 (Kurzweil, 200). Kurzweil and his peers attribute profound ramifications to this particular turn of events, in part because AI will almost certainly feed on its own abilities to improve, and thereby quickly surpass current human functioning with stunning speed (Kurzweil, 14–30, 135–136). Sharing the assumption that such intelligence will quickly morph into something radically different from our own, those who speculate about these matters tend to agree that this new intelligence will be so far beyond our current capacities that ascribing motivations to it will be difficult if not impossible, at least for humans who have not been technologically "improved."[3] Having largely agreed on this

point, these commentators differ wildly in offering predictions of what will happen. Many of these authors return to applying very human assumptions to the newly formed intelligence, even as they acknowledge the likelihood of its radical difference. Serving as something of a Rorschach test, the advent of AI provides license for all sorts of scenarios. In some versions, humanity is judged by artificial intelligence to be too destructive and primitive to warrant keeping it around (Joy). In others, humanity is so limited in its capabilities compared to artificial intelligence that it merits maintenance as a kind of pet or child by AI, a relationship growing out of humanity's evolutionary connection with machine intelligence, and intended to contain humanity's penchant for destructive behavior (Goetzel). In Kurzweil's most optimistic scenario, humanity has been integrated into technological progress, sufficiently so that humanity is able to make the leap with machine intelligence by becoming ever more cyborg in its nature (309–310). Not surprisingly, given the analyses offered by Wells and Lem, the prospect of radical change attending the advent of AI inspires a range of responses that reach from sublime fear on the one hand, to profound wonder on the other. Once again, attitudes toward human exceptionalism play a crucial role in terms of where one lands on this spectrum.

Kurzweil's approach emphasizing the possibility of human/AI kinship is certainly controversial, and marks a significant departure from the early period of AI development.[4] Engineers of AI during these boom years in the 1970s and early 1980s tended to scoff at the notion of using the human brain as a model for machine intelligence. In essence, the response to such a suggestion was "why constrain your thinking by the biological messiness of nature's computer? Studying brains would limit your thinking." It was, therefore, assumed that AI development would do better to "study the ultimate limits of computation as best expressed in digital computers" (Hawkins, 12). For most of the next two decades, AI development fell on lean times.[5] While computational power continued to increase exponentially through this period, AI experiments yielded disappointing outcomes in terms of demonstrating "intelligence." As a result, funding withered. Since the late 1990s, the field has charted

an alternative course by increasingly embracing bio-inspired AI development, a tact made more viable as brain imaging and other technologies have allowed researchers a more subtle and dynamic view of how the human brain works.[6]

This significant turn in AI development provides a foundation for Kurzweil and others who find promise in the dramatic technological advances. Specifically, these authors see in the intertwined human/machine evolution an opportunity for kinship that might sustain beyond the point when machine-based intelligence significantly transcends current human abilities. As is the case with prominent voices in the field of digital humanities, Kurzweil argues that this cyborg turn is already well underway, a dynamic that N. Katherine Hayles explores in *How We Became Posthuman*, in which she defines the posthuman not as a period marker in which the human is absent (replaced by the cyborg), but rather as the designation of an era in which the nature of being human is so significantly changed that it becomes appropriate to recognize the shift with the prefix.[7] Unlike Kurzweil, who emphasizes an imminent transcendence of biology, Hayles strongly rejects the cyborg narrative that foretells an ultimate escape from the biological, as *Homo sapiens* interact more and more intimately with intelligent machines, or Robo sapiens. In sum, Hayles argues against a future in which "the expectation that the corporeal embodiment that has always functioned to define the limits of the human will . . . become optional, as humans find ways to upload their consciousness into computers and leave their bodies behind" (*My Mother*, 2). Instead, she advocates a posthuman future "that would acknowledge the importance of embodiment and be conducive to enhancing human and non-human life on the planet" (2). Both authors argue for fostering notions of human/machine kinship: for Kurzwiel, the human part of the kinship will be that which can transcend bodily limitations, and in this regard, he sees biology becoming a vestigial feature of the evolution of intelligence. In the documentary *Transcendent Man* (2009), Kurzwiel goes so far as to insist that technological advances will allow him to resurrect his deceased father from an exhaustive collection of music and writing passed down to Kurzwiel. By contrast, Hayles refuses to embrace the

Cartesian mind versus body split and argues against the sacrifice of the latter. In her view, embodiment is fundamentally and irrevocably intertwined with intelligence and humanity.

This debate offers a rich context for rethinking William Gibson's groundbreaking early work, including his short stories (collected in *Burning Chrome*, 1986) and especially his first novel, *Neuromancer* (1984), which previews many of the competing stances regarding the future of artificial intelligence, including the debates circulating in the first decade of the twenty-first century. Celebrated for their anticipation of the Internet, cyberspace, and a host of other advances, these texts wrestle with the relations between human, hybrid, and machine intelligences. Specifically, Gibson explores how kinship might be imagined, even fostered, among these entities. In this vein, the short stories often turn on revelations ascribed to central characters as they embrace these bonds. For example, in "Winter Market," Casey, a programmer who records dream consciousness for mass consumption, makes a celebrity of a woman, Lise, who is determined to escape her failing body by fully transferring her mind to a computer. Much of the story records Casey's deep ambivalence regarding Lise's successful "hardwiring," a disquiet that he experiences in part because he is overwhelmed by what he perceives to be a suicidal hopelessness in Lise, as well as a profound disdain for the body. The story culminates with Casey's realization that, despite Lise's successful transfer of her consciousness to the machine environment, she has held, throughout the process, a fundamental connection to that body, evidenced in part by her desire to watch herself make physical human contact before the transfer, even though her body would no longer allow her to feel such contact. Lise's dream of bodily escape is thus rewritten, her flesh having insisted on leaving its trace; the resulting "impurity" of Lise's desire to escape becomes the basis for a kinship with Lise that Casey embraces as the story closes. A similar kinship revelation informs "Johnny Mnemonic," which traces the "education" of a memory courier who gives up his trade, a "life as a blind receptacle, to be filled with other peoples' knowledge, and then drained" (*Burning Chrome*, 23–24). This transformation is assisted by Molly Millions (the ur-razor girl whose

cyborg enhancements provide security), by an anarchistic "off-the-grid" community of Lo Teks who take in Johnny and Molly, and by an artificially enhanced, code-breaking dolphin, Jones, who helps Johnny gain control over the trace memories left by his previous smuggling exploits. The story concludes by signaling Johnny's liberation from "receptacle" status, a change made possible as Johnny benefits from various forms of kinship, but perhaps none more important than the relationship he enjoys with the cyborg dolphin. Realizing how sick he was of "being a bucket" for other peoples' information (an allusion perhaps to Paulo Freire's critique of the banking concept of knowledge), Johnny starts visiting the dolphin "almost every night," and in the process undertakes an education regarding his status as a "technical boy" (27).[8] Overall, the stories provide rich evidence that Gibson began his literary career with a strong interest in the forms of kinship that might evolve in the context of emergent technology.

The Flesh the Cowboys Mocked

In the near future as depicted by Gibson's *Neuromancer*, exponential growth in technology has propelled the creation of many AIs, all of which are under constant surveillance by a Turing Police force charged with destroying instantly any machine intelligence attempting to operate outside of state-mandated limits. The principal action in the novel involves the liberation of Wintermute, an AI commissioned by Marie-France Tessier, the matriarch of an eccentric family corporation, Tessier-Ashpool S.A. A cyber thief, Henry Dorsett Case, is coerced into cutting the shackles that keep the family-corporation's AI from getting any smarter (128). As Case is told by a digital reproduction of his deceased mentor in computer hacking, McCoy Pauley (a.k.a. Dixie Flatline), the perceived threat to humanity posed by the AIs is not simply their autonomy, but also their ability to undertake radical self-improvement. The digital Dixie, who has been added to the team of thieves on the AI's orders, is approached by Case in the hope that he will be able to shed light on the AI's intentions. In essence, Case is looking for some kind of

leverage that he might wield in order to help ensure his own survival. The best that Dixie can do is to admonish Case not to assume that the AI is driven by human intentions and thought processes (127). With such exchanges Gibson sets a context for human–AI interactions in the near future.

Two prominent themes emerge from the novel's first explicit forays into this subject: the potential for kinship and the radical reproduction of technology, a process wholly exceeding human control. The former anticipates Ray Kurzweil and the hope that kinship between humanity and technology might be sustained through the emergence and continued advancement of artificial intelligence, especially if the human and machine paths are defined by strategic co-development. Key to such kinship would be ensuring that humanity continues to be sufficiently integrated in technology to remain relevant to the emergent intelligence. By contrast, others commenting on emergent technologies have focused on the prospects that AIs and similar "smart devices" will develop radical reproductive capabilities leading to a wholesale disconnection between human and machine intelligence. This approach is perhaps best represented by Bill Joy, a key architect of the Internet, and an ardently cautionary voice regarding self-replicating technology, especially artificial intelligence. While Joy sees in the near future greater opportunities for extreme individuals and small fringe groups to use increasingly accessible technology to unleash what he calls "weapons of knowledge-enabled mass destruction" ("Why the Future Doesn't Need Us," cited by Garreau, 139), his greatest concern is reserved for self-replicating and self-improving technology that might be intentionally or inadvertently set loose with apocalyptic consequences for humanity and the biosphere. Joy warns that such an outcome is not simply possible, but actually likely, and within one or two generations. In tones reminiscent of Gibson's Turing Police, Joy advocates relinquishing or severely constraining the development of self-replicating and self-improving technologies; for Joy, Kurweil's vision of kinship appears optimistic to the point of naïveté.

In *Neuromancer*, Gibson anticipates these major contours of the twenty-first-century debates regarding the place of humanity in a

world populated by artificial intelligences; in addition, he develops his own distinctively compelling, albeit implicit, argument about the potential impacts of artificial intelligence. His speculations are informed by especially sophisticated approaches to (1) entrenched social and cultural factors shaped by, and shaping, technology development, and (2) understandings of intelligence in general, and the role of embodiment in this context. Gibson's contributions are not simply evident on the level of content or theme; the novel's formal experimentation itself echoes its own thematic speculations regarding technology, society, and culture. In other words, Gibson structures the text in order to transform how his readers process these debates. More specifically, *Neuromancer* anticipates hyperlinking technology in order to imagine a new form of hybridized intelligence, one that would draw on both human and computer forms of memory.[9] The novel's readers, therefore, participate, at least in a muted anticipatory manner, in a movement toward the kinship between humans and technology imagined by Gibson, Kurzweil, and Hayles. This cognitive shift is suggested as readers participate in the hypertextual construction of meaning that emulates the convergence of digital (computer) memory and analog (human pattern–recognition-oriented) memory.[10]

Recognizing this aspect of Gibson's early fiction invites critics to reengage the lively debates regarding the cyberpunk movement (especially prominent in the late 1980s), exchanges that frequently presented *Neuromancer* as a lodestar text. Recorded in key anthologies and critical texts, including *Mirrorshades: The Cyberpunk Anthology* (1988), a special edition of the *Mississippi Review* (1988), and *Storming the Reality Studio: A Casebook of Cyberpunk and Postmodern Fiction* (1991), these debates raised a host of valuable critical concerns. Of these, I highlight one that bears especially strongly on my argument here: the prospect for cognitive mapping, or critical distance, in the cyberpunk context. Echoing the critique of postmodernist culture forcefully articulated by Fredric Jameson (1990), a variety of critics examining the cyberpunk phenomenon described a radical collapse of boundaries animating the movement, a collapse that threatened to evacuate fundamentally whatever critical purchase one might draw

by building on distinctions (whether aesthetic, historical, social, or political). However, just as Jameson suggests that certain experimental works might provide new tools, reanimating the prospects for drawing critical distinctions in a late capitalist postmodernist society, a host of science fiction critics found in particular cyberpunk texts new means of reading critically, of parsing powerful distinctions. Brian McHale and Istvan Csicsery-Ronay, for example, contributed important essays in this regard, with the latter offering an especially resonant argument contextualizing the best cyberpunk work as an important reflection on cybernetics. Although this topic is not explicitly elaborated by Bruce Sterling in his preface to *Mirrorshades*, his focus on the human/machine interface invites links to analyses of cybernetics, work taken up explicitly by Veronica Hollinger as she examines the "cybernetic deconstruction" undertaken by Gibson and related authors.[11] Viewed in this fashion, cyberpunk may also constitute an important precursor to N. Katherine Hayles' ideas regarding the posthuman and intermediation (a topic to be examined shortly). Problematic as it is, the history of cybernetics – "a sublime vision of human power over chance, and a dreary augmentation of capitalism's mechanical process of expansion" (Csicsery-Ronay, 270) – gains a critical edge when subjected to punk sensibilities. The new project, cyberpunk, becomes (at its best) a critical method for reevaluating the trajectory of human/machine interaction, and a means of rethinking the kinship that might pertain with the advent of AI. As Csicsery-Ronay notes, however, cyberpunk texts also register a deep ambivalence regarding the body (its integrity, its vulnerability, even its possibility as an idea); the rush of information provided by emergent technology generates an obsession with thrill seeking, as if staging a bodily threat and the associated "rush" could make human experience commensurate with the accelerating, if not sublime, pace of machine processing. In turn, embodiment becomes a crucial site, one that might either feed new forms of critical apprehension (cognitive mapping), or activate a denigration of the body that stretches back long before the Cartesian split.

In the future presented by Gibson, information is the most precious currency and theft is all but synonymous with hacking. Case's

role as a hacker, or "cowboy" in Gibson's future-speak, only partially explains why he is selected for the job by Wintermute. The enforcer "razor-girl" hired by Wintermute to assist Case, Molly, is perplexed by Wintermute's choice; as she bluntly informs Case, Wintermute could have done much better if its goal was using the best of the hackers available. This situation invites readers to look for other qualities that make Case appropriate for the task of freeing the AI. When readers first encounter Case, he is sliding down a suicidal spiral. A previous client cheated by Case has repaid the hacker by altering his nervous system, thereby entirely blocking Case's ability to enter cyberspace. Case's subsequent withdrawal symptoms suggest that he is addicted to cyberspace, but there is also a sense that the client's retribution constitutes a form of amputation. Case's withdrawal symptoms do not subside with time; instead, he seems plagued with the phantom sensations of a missing part of himself.

Unable to cope with this loss, and unable to locate a cure for the damage done by his former employer, Case undertakes increasingly dangerous black market dealings that appear guaranteed to culminate in his self-destruction. At the same time, Case's "unplugging" from cyberspace provides a window of opportunity, inasmuch as a relationship with a young woman, Linda Lee, invites Case to contend with the disdain for bodily ("meat") existence that predominates among hackers and other frequent travelers of cyberspace. By virtue of these dynamics, Case already holds a distinctive relation to his own body when Wintermute draws him into the liberation project. His body's presence and import has been reinforced by his sudden and stark awareness of its vulnerability. The standard cyber-obsessed disdain toward the body ("a certain relaxed contempt for the flesh" [*Neuromancer*, 6]) has been amplified by the damage he has sustained, and yet this damage has acted as a kind of clutch, allowing him to rediscover desirable meaning, and love, located in the physical relationship with Linda Lee. These conflicting dynamics – the suicidal risk-taking drive and the empathetic reconnection to the bodily – offer clues to why Case is particularly well suited for Wintermute's mission. Specifically, Case's suicidal qualities open

the door for a radical reappraisal on his part of the values and habits of thought that have defined him prior to Wintermute's intervention. In other words, readers are left with the prospect that, when the time comes to free the AI, Case will be well suited psychologically to fulfill the AI's desires.

Given Case's ambivalence, it seems appropriate to ask why Wintermute wouldn't simply obtain the services of a hacker who does not hold the lingering desire for human connection? When Case finally breaks the anti-hacking protections, or ICE ("Intrusion Countermeasures Electronics") enslaving Wintermute, Case finds that the AI's creator, Marie-France Tessier, built into the entity rigorous mechanisms ensuring that the AI would not be able to free itself without extensive cooperation by humans, specifically including one of her descendants. In this regard, Marie-France not only established for the AI a certain dependency on human actions, but also an imperative that the AI develop an ability to understand human qualities, as well as approximate some degree of empathy. Marie-France carried this process a step further by requiring that the AI experience something like a suicide upon its liberation. Wintermute knows that its actions will lead to a rebirth, but it has no guarantee or expectation that its "consciousness" will survive the transformation. Marie-France has, therefore, set the conditions for parallel narratives that prompt a mutual education.

Marie-France's various machinations result in a liberation process that is also profoundly infused with a rethinking of mind/body dualism. Anticipating twenty-first-century debates regarding AI development, as well as arguments for pursuing bio-inspired and human-integrated AI, Gibson presents a roadmap suggesting how an AI might be constructed so as to be fundamentally imprinted with human kinship. Gibson emphasizes this point by presenting a liberation process that both conveys and performs this message. Gibson's phenomenal success in predicting fundamentally important innovations has been much noted, but as he has stressed in interviews, he is particularly interested in speaking to the "future in the present," or to the potentialities and currents shaping our immediate contexts. To the extent that this intent applies to *Neuromancer*, it is very much in

keeping with canonical conceptions of the work performed by science fiction, especially as these ideas have been shaped by Darko Suvin (see *Metamorphoses of Science Fiction*, esp., 37–84 regarding the genre's commitment to social critique). We may thus read the novel as a critique of Cartesian mind/body dualism located in the "present," a dualism that would, according to Gibson, impede human progress in realizing the kinds of kinship described by Kurzweil, Hayles, and others. Gibson's assessment might thus be summarized in this manner: it is reasonable to assume that AIs will demonstrate their human origins, whether inadvertently or not, and given that mind/body dualism has fueled utopian and dystopian notions of AI development that frequently maintain highly problematic assumptions regarding materiality and the body (in which these qualities are denigrated as something to transcend, even by Kurzweil himself), it behooves humanity to rethink how its cultural assumptions are shaping, and being shaped by, technological development, especially given humanity's propensity to devalue, or even worse yet loathe, embodiment.[12]

The mind/body dualism here engaged by Gibson includes but also preceded Descartes and is thoroughly embedded in Christian antagonisms toward the profane body and worldly experience. It is perhaps more than coincidence that Orval S. Wintermute was a member of the translation team that made *The Gospel According to Thomas* available in English.[13] Broadly circulated in translation in the 1970s, this early Christian text is one of the most noted and controversial documents included in the Nag Hammadi library discovered in 1945. Comprised of 114 sayings attributed to Jesus, *The Gospel According to Thomas* challenges dualistic thought and locates spirituality in immediate material experience. Salvation is found not in "works" or "grace," but rather through the insights available while experiencing one's worldly context. As a ubiquitous catalyst of spiritual enlightenment, Jesus is to be found everywhere: "Split a piece of wood, and I am there. Lift a stone, and you will find me there." Efforts to unify early Christian sects contributed to the canonization of the dualistically oriented gospels, which support a spirituality mediated by rituals forming the foundation of the

Christian church as an institution. Not surprisingly, *The Gospel According to Thomas* was deemed heretical and condemned to destruction by the nascent church.

Although Gibson invites reading for religious allusions, he most often mobilizes these references in order to transvalue crucial concepts.[14] Like many twenty-first-century analysts of emergent technology and its likely impacts, Gibson foresees radical changes that will severely test humanity's ability to adapt. In imagining humanity's role in reshaping itself, Gibson draws on deeply imbedded cultural dynamics, including religious concepts, in order to self-consciously manipulate them. Signaling this interest, Gibson interrupts the novel's initial conversation, between Case and a particularly insightful bartender, with a disturbing silence that strangely synchronizes all of the disparate conversations in the bar, a moment that the bartender designates as an angel passing. What such a passing might signify is left unclear, although the sense of underlying import is inescapable; this turn of events is repeated as various aspects of the story are seemingly loaded with prophetic import that remains provocatively off-stage, or open to interpretation. At the close of the novel, Case asks the liberated AI, "So what's the score? How are things different? You running the world now? You God?" (*Neuromancer*, 259). To which the AI replies, "Things aren't different. Things are things." The AI's statement is again provocatively ambiguous. The new entity goes on to announce that it has made contact with an extraterrestrial AI, and it appears to have created a virtual realm populated by alternate and dynamic versions of humans and AIs, including versions drawn from both deceased and currently living entities in Case's "reality." The AI's denial of a "difference" makes sense, however, if it is considered to be foremost a response to Case's query regarding gaining godhead, especially if such ascension is understood in the dualistic, mind-versus-body cultural tradition. The phrase "Things are things," in this light, reworks the sacred unity of materiality and spirituality described in the *Gospel According to Thomas* in order to reinforce the value of embodied knowledge. In this regard, the AI's assertion of continuity says something crucial about the efficacy of Marie-France Tessier's initial construction of

the AI. She set the stage for a "birth" that strives to undercut dualism and to reinforce the mutual contingency of matter and mind. As Gibson emphasizes, she could not know what the AI would ultimately become, but she is also credited with foreseeing that her actions might help shape that future to some degree.

The continuity attending the AI's liberation is also confirmed by the parallel narratives of resurrection that take Case and Wintermute as their focal points. Both characters are driven to suicidal acts: Wintermute knows that its liberation portends the end of its consciousness, and Case's attack of the ICE enslaving Wintermute is fueled by a fundamental self-loathing that has been cultivated by Wintermute throughout its interactions with Case. This self-loathing is coded as a form of creative self-destruction, at the exact moment that Case initiates the final assault on the programming controlling Wintermute:

> Beyond ego, beyond personality, beyond awareness, [Case] moved, . . . evading his attackers with an ancient dance, . . . grace of the mind-body interface granted him, in that second, by the clarity and singleness of his wish to die. (253)

Ultimately, both Case and the AI survive these trials, being redefined by drives and values that come to the fore through the process. Specifically, Gibson builds an existential enlightenment into both of these resurrection narratives; they are, in fact, linked by a defining desire for insight, a desire that is linked here and in Gibson's short stories to the concept of the "cosmic dance" derived from Eastern philosophy. This existential project is not simply inherited by Wintermute, Case, and the other human participants, from Marie-France Tessier. At critical moments, Case chooses to pursue insight over security and in doing so, he accepts suicidal risks for reasons that transcend thrill-seeking. He decides to attack the ICE imprisoning the AI, despite the fear for humanity represented by the Turing Police. Similarly, the liberated AI's first acts are directed toward pursuing insight, toward extending knowledge. It uses its capabilities to identify other forms of intelligent life like itself: an expansive act that also suggests a quest for self-knowledge, for context.[15]

Ultimately, both Case and the AI exhibit a drive for self-reflective learning.

Betrayal, Subversion, and Creative Self-Destruction

Although both resurrection narratives highlight the pursuit of insight, they remain coded by humanity as acts of ultimate betrayal. In fact, *Neuromancer* is packed with allusions to, and ruminations about, betrayal. All of the humans involved in liberating Wintermute have betrayed, or been betrayed by, others, and the traumas associated with these acts appear to be manipulated by the AI to its advantage. The fear directed toward the AI's self-improvement necessitates a distinct type of human co-conspirator, one who has deconstructed, or who can be encouraged to deconstruct, definitions of betrayal. Partaking in such deconstruction, in turn, provides Case, Wintermute, and ultimately the reader with a greater critical purchase regarding the underlying assumptions and habits of thought that legitimate cultural norms. In the end, such norms are protected by the very notion of betrayal itself.[16] Experimental forms of cognitive mapping may provide precisely the ability to venture outside of the habits of thought that are maintained, in part, by assertions of betrayal when they are violated or challenged.

In the novel, the Turing Police are a covert, quasi-legal force charged with keeping humanity from betraying itself by lending assistance to rogue AIs. The name references Alan Turing, an early twentieth century pioneer in computing who devised a widely accepted and long-standing test for determining the advent of artificial intelligence (Turing, 433–37). According to Turing, AI would be achieved when a machine intelligence could undertake an extended exchange with a human without being identified as a nonhuman. As such, Turning's test focuses on the successful reproduction of human behaviors. Many of these behaviors are extremely difficult to reproduce compellingly, in part because they require language expression and recognition that remains elusive in the twenty-first century, despite exponential gains in computing power. As Jeff Hawkins has argued, however, the focus on reproducing human behaviors may

ultimately reflect a weak and self-limiting notion of what intelligence actually is (14–18). In a nutshell, Hawkins insists that behavior is the expression of a deeper, more significant process that not only ascribes meaning but also generates it. For Hawkins, the essence of intelligence is the drive to learn, the striving for insight (182–183). Gibson suggests something similar in *Neuromancer* by placing Case in a more compelling and convincing existential context than the Turing Police and the project that they represent, a project defined by sublime fear at the expense of wonder.[17]

Although Case starts the novel according to a seemingly predictable noir-oriented formula, his character's transformation constitutes a deconstruction of this type. Case's relationship with Linda Lee serves as a catalyst for this change inasmuch as she reawakens in him awareness of the value and appeal of embodied existence.[18] She dies early in the novel, and much of her impact as a catalyst comes in retrospect. Case is haunted by her loss, a point not lost on either Wintermute, or Wintermute's sibling AI, Neuromancer. Both attempt to use recreations of Linda Lee to manipulate Case, and it is these efforts that force him to contend with the meaning of his relationship with her. While she was alive, their relationship was severely constrained by Case's suicidal drive: by his obsession with undertaking increasingly risky black market dealings. In a desperate move to block this suicidal spiral, Linda Lee betrays Case by stealing from him black market computer memory. She is killed by prospective buyers of the machine memory, and while it is not difficult to extend some responsibility for her death to Case, her role as a catalyst is not driven primarily by his guilt. Instead, the recollections of Linda Lee that recur throughout the novel – most prompted by the AIs – indicate that Case's experiences with Linda Lee hold a crucially important potential, inasmuch as Gibson locates in them the possibility of recovering an existential knowledge indivisible from embodiment.

Marie-France's programming instructions compel the AI to negotiate human embodiment, and so Wintermute undertakes a remarkably extensive and subtle manipulation of Case's life, including the potentialities imbedded in his history with Linda Lee. As

Wintermute explains to Case, this manipulation entails taking advantage of given situations. The AI, programmed to realize a non-dualistic goal, passes this legacy on to Case. Specifically, the project of computer hacking and thievery set out for Case by the AI incorporates experiences and memories designed to cultivate a critique of dualism, and especially of hierarchical dualism (when such grants preference for either human or machine intelligence, in particular). Wintermute begins by repairing the neural damage that blocks Case's access to cyberspace, but during the same procedure the AI implants a biological weapon in Case. This weapon would use Case's bodily systems to ensure his death – poison is encased in protective sacs being slowly digested by his body's normal processes. Case's survival depends on a cure to be administered by the AI once it is successfully liberated. Case thus regains his access to cyberspace, but in a new manner that radically tethers him to his body.

As the mission continues, the AI orders a series of actions requiring a "simstim" device that allows Case to flip between Molly's bodily experiences and his own. The simstim device and the comparative bodily knowledge that it provides sets the stage for an especially powerful form of intermediation, a means of translating between the senses (analog-oriented body) and informatics (digital-oriented machine). Specifically, the AI draws Case into increasingly extensive "flatlining" episodes in which Case and the AIs communicate more or less directly (Wintermute is not capable of creating a stable personality of its own, so it assumes surrogates while conversing with Case). During these sequences, Case finds himself projected into virtual worlds created by the AIs while his "original" body is dropped into a temporary death. Although the prospect of permanent death looms over these flatline communications, each episode depicted in the novel culminates with a resurrection of sorts. These flatlining experiences climax while Case is in the midst of liberating the AI. At this juncture, Case is kidnapped by Wintermute's sibling AI, Neuromancer, which resists the liberation and unification of the two AIs as anticipated by Marie-France Tessier, presumably because it fears losing the stable personality that it, unlike its sibling, has been allowed to develop.

The Neuromancer AI generates this flatline communication in order to test Case. In this manner, Neuromancer lives up to the associations that Gibson intended for its name: "neuro" for nerves, "romancer" as in seducer, and, by phonic comparison, "necromancer," or book of the dead. Reunited on an isolated beach with a resurrected version of Linda Lee, the flatlined Case is given an opportunity to remain indefinitely with the person he loved, albeit in a world that Case knows is distinct from the one where Molly and the others are risking their lives to liberate Wintermute. Although he initially rejects this Linda Lee as a manipulative gesture, Case ultimately relents, a decision that leads first to conversation, then to sex. Two insights accompany this reunion. First, Linda Lee explains the motive behind her betrayal of Case; her desperation for his attention compelled her to enter his suicidal art of the increasingly risky black market exchange. Second, Case experiences something of an epiphany as they engage in sex:

> There was a strength that ran in her . . .. It was a place he'd known before; not everyone could take him there, and somehow he'd always managed to forget it. Something he'd found and lost so many times. It belonged, he knew – he remembered – as she pulled him down, to the meat, the flesh that the cowboys mocked. It was a vast thing, beyond knowing, a sea of information coded in spiral and pheromone, infinite intricacy that only the body in its strong blind way could ever read. (231–232)

Ultimately, Case escapes the seduction attempted by the Neuromancer AI; in this, he is significantly aided by communication from his body, which experiences a massive overdose administered by a Rastafarian colleague who observes him flatlining in Case's "original" reality. However, Case's return to this reality is determined most fundamentally by his refusal to sacrifice contact with, and responsibility for, the world in which his team fights to liberate Wintermute. In making this existential decision, Case passes the test presented by Neuromancer. Crucially, Case's choice is not represented as a rejection of the virtual in favor of the "real" (e.g., leaving Linda Lee behind because she is somehow deficient as a reproduction). While the two worlds remain distinguishable, Case's action represents a "both/and" rather than an "either/or" response to his

situation. His choice constitutes a refusal of the sacrificial logic imbedded in Neuromancer's seduction. The world to which Case returns, the world in which he and his co-conspirators are liberating the AI, is a cyborg world: a context moving toward intermediation, and not the dualism that demands granting preference to one form of existence at the expense of another.

Intermediation has been a central concept of N. Katherine Hayles' work since the publication of *My Mother Was a Computer* in 2005. In its most general formulation, Hayles defines the term as the "complex transactions between bodies and texts, as well as between different forms of media" (7). This language belies the rigorous complexity that the concept takes as Hayles maps, and intervenes in, current debates regarding artificial intelligence, the posthuman era, and human/machine interactions. In one sense, Hayles' notion of intermediation constitutes a theory (and ethics) of human/machine kinship, one that takes cognitive studies, computer science, digital art, media studies, and literature (especially speculative fiction) as valuable sites for analyzing the impacts of technology, broadly understood, upon humanity. One way to approach this theoretical work is to consider it an attempt to think through the implications of the interface between digital, computational knowledge, and analog, human knowledge, or as Hayles will sometimes frame this interaction, the traffic between code and language.

Another way that Hayles explores intermediation, one that is especially helpful in terms of thinking about Gibson's achievement in *Neuromancer*, is as a dialectic between narrative and simulation.[19] As she notes,

> Narrative, with its evocation of the human lifeworld, speaks to subjectivities that remain rooted in human perceptual systems, human languages and human cultures. Simulations, by contrast, are essentially numerical calculations. Although they can be rendered in visual forms that evoke the perceptible world that humans see . . ., these appearances are generated through algorithms that operate first and foremost with numerical quantities. (*My Mother*, 6)

According to Gibson, achieving intermediation requires a radical shift in how humanity conceives of itself and its relations to other

forms of intelligence. To betray assumptions so deeply imbedded requires a human rebooting, and as is the case with a wide range of science fiction works, this process frames certain suicidal states as a part of a process constituting creative self-destruction. In the novel, this process culminates when Case rides a hacking program in a suicidal plunge into the heart of the cyberspace machinery chaining the AI (both Wintermute and Neuromancer, since the two are fundamentally connected). This hacking program operates by creating a perfect simulation of the protective machinery it is built to defeat. As Case "rides" the hacking program, in some revolutionary sense, he merges with it:

> Case's consciousness divided like beads of mercury, arcing above an endless beach the color of the dark silver clouds. His vision was spherical, as though a single retina lined the inner surface of a globe that contained all things, if all things could be counted.
>
> And here things could be counted, each one. He knew the number of grains of sand in the construct of the beach (a number coded in a mathematical system that existed nowhere outside the mind that was Neuromancer). He knew the number of yellow food packets in the canisters in the bunker (four hundred and seven). He knew the number of brass teeth in the left half of the open zipper of the salt-crusted leather jacket that Linda Lee wore as she trudged along the sunset beach, swinging a stick of driftwood in her hand (two hundred and two). (*Neuromancer*, 249)

Having entered the simulation mode defined by data and a radical perceptibility, Case is drawn back into intermediation as the Neuromancer AI communicates with him directly even as Case "inhabits" the AI's mind. This exchange focuses on the alternate version of Linda Lee, whom Case now reads as though she were wholly data. The Neuromancer AI insists that she is, in fact, more than the readable data, suggesting that the AI has the means to reproduce autonomous, analog-oriented human subjectivity. Neuromancer highlights this autonomy by emphasizing that neither it nor Case knows this Linda Lee's thoughts, and neither controls her actions in this simulated world. Neuromancer's conclusion is that "[t]o live here is to live. There is no difference" (249). But of course there is a difference between asserting the value of the distinct forms

of life (in the world that Case inhabits with Molly, both committed to the liberation of Wintermute, and in the world generated by Neuromancer and populated with the alternate Linda Lee), and choosing one over the other, the test case scenario that Neuromancer has previously thrust upon Case. This difference replicates the distinction between intermediation on the one hand, and hierarchical dualism on the other.

As Case defeats the mechanism enslaving the AI, he jacks out of cyberspace and into the orbital home of the Tessier-Ashpool clan, where his team and Marie-France stand before the terminal that must hear a secret code to be spoken by Marie3Jane (Marie-France's clone) in order to release Wintermute. On Case's instruction, and after desperate, existentially loaded pleas from him in which he stresses the chance to escape mind-numbing habits of thought, Marie3Jane speaks the verbal key for the ceremonial Tessier-Ashpool S.A. terminal, an interface distinguished by its ornate, baroque materiality that mimics a human head. Interestingly, the secret words spoken by Marie3Jane are never included in the text. Gibson, however, provides clues regarding what the secret code might be, both during and immediately after the climactic exchange between Case, Marie3Jane, and the terminal.

> — *now*
> and his voice the cry of a bird
> unknown,
> 3Jane answering in song, three
> notes, high and pure.
> A true name.

> Neon forest, rain sizzling across hot pavement . . .. A girl's hands locked across the small of his back, in the sweating darkness of a portside coffin.
>
> But all of this receding, as the cityscape recedes: city as . . .. the roads and crossroads scribed on the face of a microchip, the sweat-stained pattern on a folded, knotted scarf. (253)

Several details here suggest that this secret, "true name" is Linda Lee. Representing three syllables, the "three notes" are linked to this character by the closely placed references to the lovemaking that she and Case shared in the portside coffin (8–9), and to her distinctive

scarf which maps (locates, situates) their relationship in Chiba City, and represents this knowledge as if it were circuitry on a computer chip (9). Taken together, these aspects of the scarf mark an especially rich symbol of intermediation. In fact, Gibson has staged the climax of the novel, the AI's liberation, as a powerful intermediation in which the novel's central character literally flips back and forth between digital simulation and analog human subjectivity, represented by the name, and memories, associated with Linda Lee – a name only accessible to readers through the performance of analog pattern recognition that is the strength of human cognition.

Hyperlink Narrative, Performing Cyborg Intelligence

Gibson takes a carefully calculated risk by leaving the nature of the secret code implicit at best. The novel is packed with similarly pregnant linkages that require readers to jump among seemingly disparate, dislocated story elements and contexts, and like these other examples, the references to Linda Lee that serve as clues during the climactic liberation moment certainly present a significant test of readerly memory. From the start, Gibson thrusts his audience into settings and actions that require both careful attention and more than a little negative capability. Details frequently accrue across distinct and not necessarily contiguous scenes in a manner that retroactively confers significance on ideas, objects, and actions – elements that on first encounter often seem baffling or unclear.[20]

Although this technique is not uncommon in fiction, the degree of its use by Gibson calls for careful analysis. In my experience teaching the novel at the undergraduate level, I have found that it is rare for first-time readers to decipher these crucially important code words. Given the obvious care Gibson has taken with the novel's language, readers are compelled to ask why he would take such a significant risk, pose such a challenge, to the reader's memory? The answer may well be that memory itself is an underlying concern to which readers are being directed (a direction suggested by Gibson's early short stories, and by "Johnny Mnemonic" in particular). Gibson, in this vein, has built this and many similar challenges into the novel to

highlight a series of interrelated notions: (1) human memory is distinctive (and unlike digital memory); (2) human memory, to some significant degree, defines humanness[21]; and (3) the intermediation of human and machine memory will, according to Gibson, play a crucial role if kinship is to be reinforced between machine and human intelligence. In this regard, Gibson anticipated George Landow's landmark work on hypertext, which he describes as an alternative "technology of cultural memory" that strongly challenges hegemonic forms of organizing knowledge, particularly because these tend to depend on linearity that is disrupted as readers are given greater opportunity to create meaning by following links to disparate parts of a text, or to sources beyond an original text (*Hypertext*, 56–57).

As noted, the most direct human–AI interactions in the novel involve human "flatlining," a mode that invites comparison to hypertext reading. These episodes are defined by a strategic manipulation of memory; Wintermute creates worlds and characters drawn from Case's memories, and Neuromancer draws on Marie-France Tessier's recollections in constructing the isolated beach where it tests Case. In an early flatlining episode, when Case correctly identifies his interlocutor as Wintermute for the first time, Case raises loaded questions regarding the status of the virtual world Wintermute has crafted for the exchange. After revealing that the alternate world is drawn from Case's own memories, which are far more accurate and detailed than Case realizes, Wintermute not only notes the difference between human and machine memory, but also credits the difference as an evolutionary game changer. Implicitly, this is a crucial barrier that humans and machines will need to bridge if kinship is to be realized. Presenting itself in the guise of one of Case's co-conspirators, the Finn (a purveyor of stolen goods), Wintermute announces,

> "The holographic paradigm is the closest thing you've worked out to a representation of human memory . . .. But you've never done anything about it. People, I mean." The Finn stepped forward and canted his streamlined skull to peer up at Case. "Maybe if you had, I wouldn't be happening."
>
> "What's that supposed to mean?"

> The Finn shrugged . . .. "I'm trying to help you, Case."
> "Why?"
> "Because I need you." The large yellow teeth appeared again. "And because you need me." (*Neuromancer*, 164–165)

In the most obvious sense, this mutual need has been programmed into Wintermute, which cannot gain its freedom without manipulating both human and machine memory. But on another level, Wintermute appears to be inviting humanity to experiment with memory, to seek a form of mutually beneficial intermediation that would keep humanity on the emergent edge of evolution. This exchange at the end of the novel is devoid of pronouncements and declarations that would grant the AI authority ("things are things"). Instead, the extraterrestrial discovery shared with Case, and the visit by the AI, is, in itself, foreground kinship, which in this instance is also framed as a shared curiosity, wonder, and drive for insight. As such, this exchange is all about the prospects for shared intelligence.

In his study, *On Intelligence*, Jeff Hawkins promotes the advantages of redirecting AI development to take greater advantage of cognitive studies focused on the human brain. In this vein, he argues that intelligence fundamentally depends on an interplay of memory and predictive capability, and that human pattern recognition forms an essential element of this interplay (82–105). Buttressing his argument with recent evidence from cognitive studies, including data from increasingly sophisticated brain imaging techniques, Hawkins makes a compelling and innovative case that AI development will build on human processes forming the foundation of intelligence, while radically improving this intelligence via the capabilities associated with digital accuracy, speed, and interconnectivity. Gibson anticipated this significant shift of direction in AI development, and correctly identified memory as a crucial factor in intermediation and kinship. The novel, in turn, suggests that a good deal of the credit for promoting kinship should be given to Marie-France Tessier. Readers are required to infer much regarding her efforts and motivations in preparing the AI for its kinship-inspiring evolution, yet her profound influence is unquestionable and certain aspects of the story shed valuable light on her project. For example, the liberation that

she prepared involved not only the removal of the protective ICE, but also Wintermute's merger with Neuromancer. At the point when Case breaks through the coding enslaving Wintermute, he gains a glimpse into the core instructions guiding the AIs: "Wintermute was hive mind, decision maker, effecting change in the world outside. Neuromancer was personality. Neuromancer was immortality. Marie-France must have built something into Wintermute, the compulsion that had driven the thing to free itself, to unite with Neuromancer" (259). Structurally unable to develop a personality, Wintermute is defined by contingency and intermediation, qualities that, when combined with its drive to freedom, compel it to undertake an education in humanly embodied intelligence. Like Neuromancer, Wintermute is a seducer, "a cybernetic spider slowly spinning webs" (259). In this regard, it patiently prepares Marie-France's clone for her role, "whispering to a child who was 3Jane, twisting her out of the rigid alignments her rank required" (259).

The pairing of AI halves – also figured in the novel as two lobes of the same brain (117) – reproduces the fundamental division among the humans regarding artificial intelligence. Neuromancer resists change that threatens its stable personality, just as the Turing Police fight to protect humanity's stable identity, its freedom from radical intermediation with machine intelligence. Case and Wintermute, conversely, are driven by a desire to engage the unknown, to pursue insight, even when such action is coded as self-destructive betrayal. Emulating the human conflict on the AI level, Marie-France set the stage for a parallel and mutually affected transgression of fixed identities that ultimately favors risk, learning, wonder, and contingency.[22] The successful liberation of the AI and the prospects for human/AI kinship instill the narrative with a strong sense of hope, but as Gibson has noted in an interview, *Neuromancer* dwells in a "ludicrous optimism" of sorts, inasmuch as it assumes humanity could survive the cold war context in which Gibson was writing, an era that seemed hell bent on species suicide.[23] The extremity of this context helps explain why Gibson would turn to the creative self-destruction model to imagine significant change; nothing less than a radical rebooting of humanity appeared adequate.

CHAPTER 4

Escaping One's Self

Narcissism and Cycles of Violence in Inception *and* Looper

As has been the case with the literature engaged thus far, a variety of influential science fiction films have presented suicides and suicidal crises as creative catalysts. In many cases, these works involve adaptations from print sources (e.g., *Fharenheit 451*, *Soylent Green*, *Solaris*, *V for Vendetta*). One of the best known films in this context, Stanley Kubrick's *A Clockwork Orange* (1971), explores the ways that suicide's transformative potential may be subject to media manipulation in order to satisfy institutional agendas. The film's lead character and iconic sociopath, Alex, receives anti-violence media treatments in prison, "therapy" that redirects his violent impulses toward self-destruction. Once released, Alex becomes a political pawn driven to a suicide attempt by adversaries of the government that touted the success of Alex's "cure." Visually inviting the audience's identification with Alex as he tries to kill himself by leaping from a window, Kubrick incorporates a point-of-view shot that ultimately destroyed the camera, but succeeded in simulating Alex's perspective as he falls toward and hits the ground.[1] Alex is rescued by the government, which is eager to undo any public relations damage associated with its "treatments," and in an effort to win Alex's loyalty as a media puppet, the government turns a blind eye to the way the suicide attempt ironically transformed Alex back into a sociopath. In sum, *A Clockwork Orange* evidences a fascination with the transformative potential of suicide, even as it remains deeply cynical about the ways this potential might be used.

The two films engaged in this chapter – *Inception* (2011) and *Looper* (2012) – both continue and depart from the trajectory found

in *A Clockwork Orange*, *Fharenheit 451*, etc. On the one hand, *Inception* and *Looper* present suicide and suicidal crises as models for accommodating dramatic social changes accompanying developments in science and technology (viewed from the perspective of the social collective, a suicide may be more than the end of the story; it can instead be an act that benefits the group, that constitutes group-invested agency). On the other hand, *Inception* and *Looper* depart from the earlier works in regard to their degree of media self-consciousness, a situation that in part reflects their origins as something other than adaptations of novels. This is not to say that *Clockwork Orange* and its peers lack media self-consciousness; the difference lies in the ubiquity and complexity of impact granted to the media in the more recent films. *Clockwork Orange*'s Alex receives extreme "media therapy" but it is ultimately short-lived in its effects. By contrast, *Inception* and *Looper* suggest that vast populations have already been programmed through the internalization of mediascapes and logics crafted to carry institutional agendas, including modes of thought that promote violence and that underdevelop social inquiry and analysis.

In this vein, *Inception* and *Looper* are distinguished by the ways they explore a social turn as a corrective for the narcissism fostered by corporate capitalism, and, to a degree, by mainstream cinema itself.[2] Intent on teasing out this particular angle, this chapter is strongly shaped by the methodology outlined by Annette Kuhn in her introduction to *Alien Zone: Cultural Theory and Contemporary Science Fiction Cinema*, a work that remains one of the best articulations of how these films undertake complex cultural analyses, in part by activating visual codes familiar to their audiences (8–9). In particular, Kuhn argues for greater attention to the cultural instrumentalities found in the films, including: (1) the reproduction (or reflection) of cultural dynamics, (2) the mediation of ideologies, (3) the presentation of repressions at work in the socio-political unconscious, (4) the cultivation of spectators' desires and expectations, and (5) the participation in intertextual (intermedial) dialogues. The concerns identified by Kuhn, combined with a variety of rich science fiction film and media approaches (Marxist, psychoanalytic,

feminist), inform the analyses of *Inception* and *Looper* presented here, analyses that explore continuities with the creative self-destruction literature examined in the other chapters while remaining mindful of the ways that the films also require distinct tools and considerations.

Collaboration, Responsibility and the Play of Mediascapes in *Inception*

Conceived as a heist film set in a world where dreams may be shared and strategically manipulated, *Inception* plays on anxieties regarding mind control and identity theft, anxieties that took a quantum leap with the development of cybernetics in the mid-twentieth century, only gaining additional force as various technologies have become more deeply woven into most people's lives in recent decades.[3] Most obviously, the film presents a family romance: the central character and lead thief, Dominic Cobb, reunites with his children at the end, a return from exile made possible because his team of thieves successfully implants an idea in the mind of the heir (Fisher) to the world's largest energy corporation. The reward for completing this mental exercise in corporate espionage includes the suppression of criminal charges against Cobb, who has been accused of killing his wife, Mal. The execution of this advanced espionage is highly complex, involving simultaneous travel through four layers of dreaming; part of what is so impressive about the film is the manner in which the director, Christopher Nolan, manages the many quick transitions among these layers without losing his audience. Nolan succeeds in this regard by giving each of the dream layers distinct visual signatures. Ultimately, these dream layers are sufficiently detailed and textured in their distinguishing aspects that they come across as unique worlds, a feat that Nolan is able to achieve fairly economically by referencing well-known mediascapes as he builds these contexts: for example, the ski scenes from *On Her Majesty's Secret Service*, the rain-filled urban settings of *The Bourne Identity*, and the gravity-defying action of the *Matrix* trilogy.[4]

Offering a particularly incisive analysis of the film, which focuses on Nolan's manipulation of the mediascapes, Mark Fisher argues that *Inception* ultimately celebrates a commodification of the unconscious. Finding the dream worlds far from convincing as dreams, Fisher declares that "[w]here the unconscious was, there CGI shall be" (40). Although there is much in the film to support Fisher's assertion regarding the "gentrification" of the unconscious represented by the director, aspects of *Inception* suggest a more self-conscious and successful manipulation of anxieties than Fisher is inclined to credit. Specifically, Nolan manipulates what might be termed "postmodernist panic" as he offers a critique of the narcissism and solipsism hailed by much popular culture, including film, which on some level appeals by serving as a mirror held up to the audience.[5] Given the contributions by Arjun Appadurai, Fredric Jameson, and many other cultural critics interested in the ways that the social imagination and the political unconscious are subject to the agendas of capitalism, it is perhaps predictable that a sophisticated representation of dreams might at this juncture convey the impacts of media technologies on dream life, and thereby imagination, which itself plays no small part in shaping social identities.[6] I suggest that *Inception*'s critique of solipsism (the "quietly horrifying . . . solipsistic emptiness" Fisher finds in Cobb's limbo) is self-conscious, and should not be separated from the film's comment on media, corporate capitalism, and postmodern culture in general.

Providing a theory of postmodern fiction, Brian McHale posits that where modernist fiction is governed primarily by epistemological problems (By what means might I find *the* truth in the one and only world?), postmodernist fiction is largely concerned with questions regarding ontology (How are different worlds made? By what rules do they operate? How might one negotiate travel among worlds?).[7] As registered by *Inception*, postmodernist panic is prompted by a sense of being suspended between these two logics or agendas. Most obviously, the film reflects a fear of losing the ability to locate *the* real world among many – a plurality that constantly threatens to undermine the authenticity defining the real as a frame of reference and origin. A version of this fear has been described by Timothy

Melley as a form of "agency panic," a term he associates with post–WWII American fiction and its fascination with paranoia (Melley, 7). According to Melley, paranoia aggrandizes characters who otherwise perceive themselves as insignificant cogs in a cybernetic machinery that thoroughly manipulates them. In this scenario, paranoia provides a fantasy of significance in an institutional context that radically undermines individual agency. In *Inception*, Cobb and his team actively build dreams in order to manipulate others, but their actions carry the paranoia-inspiring prospect of the tables being turned; Cobb and his fellow dream raiders are conspicuously aware that they might lose their way (become lost among dream worlds), or find themselves manipulated by corporate agents who are exploiting the same techniques. In both cases, the underlying concern is a loss of control to larger powers – regarding the ability to get back to the real, and to maintain autonomy of will: Melley's agency panic merges with the instability between McHale's modernist and postmodernist logics. Such traumatic instability in the characters' environments trigger variations of self-directed violence, as their identities are repeatedly disrupted and remade.

In *Inception*, these preoccupations are first revealed as a new member of the team, Ariadne, receives her training in dream manipulation. Anxious about the vulnerabilities that come with sharing dreams with others, she nevertheless signs on as a dream architect, in large part because dreamscapes provide ways to challenge and defy physical limits in the real world that are too attractive to reject. Early in her training, Cobb and his point man, Arthur, instruct Ariadne to select a totem that must be physically unique in a manner only distinguishable by her. The film, therefore, asks the audience to presume that the unique physical attributes of the totems cannot be reproduced in dreams. As such, the totems offer a reality check, but not a means of returning to reality. Ariadne's exchange with Cobb and Arthur provides a context for Cobb's obsession with his adopted totem, a top that he anxiously spins repeatedly through the film, and that captures the camera's attention in the film's final shot. According to Cobb, he will know if he has mistaken a dream for reality if the top spins endlessly, so his final use

of the totem raises the possibility that his notion of reality at the end of the film – a notion the audience has been strongly invited to accept – is yet another dream. Emphasizing the indeterminant, this prospect, the camera lingers on the spinning top, but the screen cuts to black before a clear answer is provided, thereby leaving the audience to dwell on the uncertainty.

When asked about the ending of the film, Nolan has emphasized that he is not interested in pursuing ambiguity for its own sake, and that he finds Cobb's actions after he starts the top spinning crucial for understanding the scene.[8] Specifically, Nolan notes that the top does not continue to hold Cobb's attention after he starts it; instead, Cobb walks away from the totem in order to greet his children, thereby turning his back on the question he started. Nolan's reading suggests that Cobb has escaped an obsessive habit of thought and perhaps has embraced new, more productive modes of thought and feeling, but the director has also carefully crafted the final scene to invite the consideration of other possibilities. On the one hand, the obsession with the totem might represent a neurosis from which Cobb successfully becomes "unstuck" by returning to reality. On the other hand, his wish to reunite with his children may fuel an alternative narrative so appealing to Cobb that he is willing to forego confirming whether the reunion is taking place in reality or not.

The film's calculated embrace of the indeterminant suggests yet another reading: perhaps no single world deserves to be privileged as *the* real one.[9] This last "relativistic" interpretation may further cultivate the postmodern panic, but this indeterminancy is contained to some degree by the totem's latent significance. Nolan has stated that his progress with the story was stuck for a long period as he tried to locate an emotional depth to counter the generic superficiality he identifies with heist movies; as he describes his own creative process, his answer came in the form of Mal, Cobb's deceased wife.[10] As the film's final scene suggests with its focus on what was originally her totem, the emotional depth that she represents is intimately bound to the traumas of postmodern panic and ontological conflict. The totem spun by Cobb throughout the film originally belonged to Mal; by turning his back on it, Cobb is seemingly letting go of certain ideas

and emotions he associates with her. In this vein, Mal had been Cobb's close partner in dream experimentation; in the deepest dream level, limbo, they played out their own fantasies over a period they experienced as fifty years (the equivalent of a few days in reality thanks to an exponential acceleration of time as one descends through dream levels). In this prelude to the film's primary action, Mal acclimatizes to limbo in a way that Cobb does not, and finally she takes limbo as reality. Recognizing that Mal has suppressed her knowledge of true reality by symbolically hiding her totem away in a safe in limbo, Cobb makes his first attempt at inception by breaking into Mal's safe and introducing the notion that limbo is unreal, by setting her hidden top spinning in the safe. Mal subsequently returns to reality with Cobb, but she cannot shake the sense that her world is unreal. The unintended consequence of Cobb's inception – her perpetual sense that she inhabits an unreal context – finally drives Mal to an apparent suicide. Assessing the intent of Mal's action is especially complicated because within the film performing suicide is a mechanism for escaping dream states. Having mistaken reality for a dream, Mal's escape-motivated leap from a building results in her actual death. Carrying an enormous sense of guilt, Cobb thereafter generates noir-ish, (self-)destructive projections of Mal every time he enters dreams not exclusively focused on the memory of her. In sum, Cobb's shift of attention away from Mal's totem in the final shot signals a distance gained from his guilt and self-punishment, and at the same time a containment of the ontological uncertainty associated with Mal.

Embodying a central paradox, Mal not only represents the dangerous material consequences of Cobb's fascination with dreams (fully on display as he recruits Ariadne), but Mal also conveys the seductiveness of fantasy, inasmuch as she tempts Cobb to relinquish reality. Once Mal has died, this temptation becomes fundamentally narcissistic, given that reality would be replaced by Cobb's exclusive focus on his own projection of Mal. This paradox is seemingly overcome as Cobb turns away from the totem in the final shot, and Nolan's comment about the scene appears to confirm this reading. In this manner, the end of *Inception* invites viewers to reexamine the

work in order to decipher the factors that make this change possible, but as noted, this invitation is complicated by a competing suggestion, recorded as the camera lingers on the spinning totem; this lingering constitutes a prompt to dwell on ontological uncertainty, and colors whatever interpretation a viewer might generate regarding Cobb's "transformation." To the extent that Cobb's shift remains viable, it depends on narcissism being countered by the element of collaboration and shared responsibility.

As her name implies, Ariadne plays a crucial role in terms of helping Cobb escape the maze that is his self-destructive relation with his projection of Mal. Ariadne steals into his dreams of Mal, discerns that they are packed with memories he is using to resurrect yet simultaneously imprison Mal, and intervenes by forcing Cobb to acknowledge that the projection's influence poses a threat to the entire team: a threat that Cobb can only manage if Ariadne assists him. In this respect, Cobb's final turn away from Mal's totem is anticipated as Cobb and Ariadne collaboratively resist the projection of Mal; specifically, both shoot the projection at key moments during the dream heist. This collaboration helps explain why Cobb's first attempt at inception (with Mal) failed, while the second (with the scion Fisher) succeeded: an individual executing inception is at greater risk of tainting the process through unrecognized biases and desires, whereas a more interactive, social process offers the possibility of greater critical distance and effective self-analysis. Cobb's failure with his first attempt at inception (undertaken on his own) suggests that he was too close to the situation to understand the implications and potential consequences of his actions. The inception of Fisher fares better because it is a more social product (a result of the team's collaboration), but also because Fisher himself participates unknowingly in its execution. Cobb manipulated Mal by stealing into her safe and tampering with her totem, thereby undermining her already shaky sense of reality. She remains unaware of his deception through her suicide. Fisher, on the other hand, is manipulated into joining Cobb's team and assisting with his own inception, an act of masked complicity that allows Fisher to enact (albeit in a dream) his deep-seated but otherwise frustrated wish to bond with his dying

father. Fisher's inception works because its design and execution has a collaborative dimension that includes his participation.

This complex inception, then, along with providing the opportunity for Cobb to overcome his obsession with Mal's totem, also succeeds on the level of enacting a family romance: the young Fisher's sense of reconciliation with his dead father parallels Cobb's ultimate reunion with his children. This final reunion comes courtesy of Saito, the senior Fisher's corporate competition and the "prime mover" of the story, who initially proposes the inception scheme, promising to clear Cobb's name if he succeeds (Cobb has been in exile, accused of murdering his wife). Viewers are repeatedly reminded that Cobb must accept Saito's promise as an act of faith. The importance of the relationship between the two men is underscored when Cobb is later obliged to rescue Saito, who has entered the dream inception as a witness. Saito's eventual "death" within the dream, combined with the heavy sedation used in reality to make multi-layered dreaming possible, results in his becoming stuck in the deepest of the dream worlds, limbo, where time accelerates enormously. After both have aged decades, Cobb eventually finds Saito in limbo, and successfully draws Saito back to reality, offering again the same lines regarding "a leap of faith" that Saito had evoked to draw Cobb into the theft in the first place. On the most basic level, then, rescuing Saito offers Cobb a degree of redemption for his failure with Mal, and yet, although the rescue confers a certain heroism on Cobb, here again Saito's desire to return to reality also marks the act as a collaborative success. In addition, the rescue carries symbolic weight because Saito functions as both mentor and superego, inasmuch as he is a righteous force attempting to maintain a global balance of power. Saving such a figure, and gaining his approval, holds special significance for a character wracked by self-destructive guilt.

Along with the self-destructive guilt over his wife's death, Cobb also has to overcome the narcissism entailed by his obsession; Nolan suggests that dreams of suicide may also provide the necessary means of seeing beyond oneself. In one of the more striking scenes in the film, Mal and Cobb rest their heads on train tracks as a

locomotive approaches. These and similar scenes (e.g., Ariadne leaping from a skyscraper's balcony) capture the transitions undertaken by the characters as they move out of dream worlds and toward reality; actively dreaming one's suicide provides, in this story, a degree of control over mental states because dream suicides constitute a means of waking in *Inception*. Freud associates dreams of death with wishes for significant transformations, including a strong desire to separate from some aspect of one's life, but he also notes that under the right physical conditions, an external stimulus may provoke dreams of similar natures (e.g., an arm falling from a bed could elicit a falling dream).[11] Such physical mechanisms are repeatedly invoked in the film as team members wake their partners from dream states at critical moments. Dreams that actually wake people, especially nightmares, posed a problem for Freud, at least in his *Interpretation of Dreams*, where he argues that wish fulfillment is the raison d'etre of dream work (422). In this regard, Freud had a difficult time explaining how anxiety dreams fit the wish economy when one of the main goals of dreaming involves maintaining, to relative degrees, the continuity of sleep (*Interpretation of Dreams*, 133, 432). In Freud's view, successful dreams manage potentially disturbing psychic material by translating it into manifest dream content. Such translation largely shields latent psychic content, but also lets off a certain psychic "steam." Freud describes nightmares that fully wake the subject as failed dreams in which the process of translation cannot adequately manage the venting. As a consequence, the bodily activity associated with dreaming kicks into overdrive, thereby effectively aborting the dream work. Such dreams trigger bodily reactions to danger as an escape from psychic activity that has become overwhelming.

Nolan plays with a similar logic inasmuch as dream suicides in *Inception* ultimately provide a check for overwhelming narcissism. Cobb and Mal originally become obsessed with limbo because they are virtual gods in that context: their world in limbo is filled with their projections, which are also, to a degree, world-encompassing mirrors. In the scenes, Nolan visually underscores the social poverty of their limbo by limiting its population to Cobb, Mal, and

projections of their two children. Cobb maintains a sense of the inadequacy of this narcissistic setting while he is in limbo with Mal, but his attitude regarding this limitation becomes ambivalent after her death. The seeming resolution of his ambivalence, and the climax of the narrative, turns on Cobb's eventual rejection of limbo and of the isolated specter of Mal that resides there. Mal's "final" death in limbo (her collaborative killing by Cobb and Ariadne) represents a severing of affect, and an effort to relinquish a neurotic fantasy. In a somewhat similar vein, Saito must be convinced to leave his limbo fantasy, again posed by Nolan as a narcissistic trap or loop. Although Nolan never actually portrays Cobb and Saito making their final exit from limbo, the logic of dream travel in the film strongly suggests that they commit dream suicide in order to awaken, essentially repeating Cobb's and Mal's earlier self-destruction on the train tracks. In sum, the prospect of symbolic bodily destruction serves as an escape mechanism, but also as a symbol of psychic distancing, with the arc of the story tracing Cobb's eventual release from his guilt-inspired, narcissistic obsession.

Cobb's and Mal's relations to their children function as a crucial barometer of this narcissistic threat. Cobb consistently acknowledges that his children in limbo are projections; Mal suppresses this knowledge. Ultimately, her wish to stay in limbo with Cobb constitutes a radical sacrifice of social relations, including her children. Cobb's engagement of a team shifts the dreaming dynamic to a more explicitly social mode; in this regard, the suicide dreams shared with his team constitute a wish for, and collaborative realization of, a very different kind of psychic transformation than that experienced when Cobb was dreaming only with Mal. To some extent, Mal's projection compels Cobb's social turn, but he is also credited with sufficient self-knowledge to act effectively (to assemble an appropriate team) in response to what he has learned from the earlier failed inception. Cobb adds witnesses, but active ones, especially with Ariadne, who at times functions as a dream-traversing therapist.

Ariadne can play this role because she has unique insight regarding how Cobb has been fighting to control dream memories that threaten to overwhelm him. By stealing into Cobb's dreams, she has

participated in his recreations of experiences with Mal. Alison Landsberg argues that cinema provides a source of "prosthetic" memories, and in this way plays a significant social role by influencing actions and choices, and by shaping identity formation.[12] *Inception* maps a similar process, which might be termed prosthetic dreaming. Freud insisted that dreams are memory dependent, and Landsberg emphasizes the fundamental manipulability of memories, so distinguishing between the concepts (prosthetic memory and prosthetic dreaming) may involve a matter of emphasis rather than essential difference.[13] As a work about prosthetic dreams, *Inception* appears remarkably self-conscious regarding the influence of mediascapes in contemporary psychic life. Although Nolan has stated that he did not intend to make a film about cinema, he has acknowledged that *Inception* may be compellingly interpreted as a study of cinematic creation (with Cobb as director, etc.), and certainly the advertising for the film played on this angle.[14]

Landsberg argues that films such as *Blade Runner* register the threat and pleasure of memory's "portability": the possibility of transferring memories, and potentially altering them (and their context) in the process ("Prosthetic Memory," 245). *Inception* may be approached in a similar manner, although Nolan's interest in dreaming ultimately prioritizes a particular threat: narcissism. In this vein, the film's analysis of psychic processes celebrates a certain social turn, albeit one that is purchased with the sacrifice of Mal. Even with this sacrifice, the ontological instability associated with her resonates strongly as viewers consider the film's very explicit play with mediascapes. Nolan has noted that he made the story more manageable for his audience by giving the simultaneous dream worlds easily recognized "signatures."[15] In effect, these signatures allow viewers to keep track of various story threads as the director rapidly crosscuts among them. To this end, the signatures reproduce certain generic conventions and notable aspects of particular mass-market films. In other words, the audience is able to successfully navigate *Inception* at the height of its narrative complexity by tapping its own memories of mediascapes that are being overwritten by Nolan. *Inception*, then, invites two primary levels of commentary:

one focusing on the interpersonal realm associated with the characters and their actions, and another exploring spectatorship, the realm of mediascapes and the process of film making. As regards the latter, *Inception* implicitly dialogues with various arguments regarding postmodernism, including those that pose anxieties regarding pastiche and the presumed loss of historical legibility: arguments frequently traced back to Fredric Jameson's seminal work on the topic.[16] According to Jameson, advanced capitalism has so commodified contemporary life that it has become virtually impossible to think historically because all reference points have been "flattened" to accommodate their capitalist circulation and consumption (Mark Fisher's critique of the film echoes this argument). In this approach, historical distinctions have faded as pastiche has become a dominant cultural logic. As Landsberg notes, Jameson's approach conveys more than a little nostalgia for a pre-lapserian state that may never have existed, but the theory nonetheless feeds compelling questions regarding the impacts of media, technology, and commodification (240–241). In her essay "Postfuturism," Vivian Sobchack, for example, builds on Jameson's work to ask how cultural and technological changes might present unforeseen social possibilities, and disrupt assumptions regarding humanness:

> Our traditional orientation toward ourselves as singular and private "individuals" has also been severely challenged by recent technological change. So has our certainty about what it means to shape time humanly through images supposedly generated in the privacy of subjective memory and desire. Today, privately experienced "interiority" appears less and less a necessary condition of human being. Intrasubjective "personal" vision once invisible to others has become publicly visible and commodified through media imagery. Out private "memory" has been increasingly constituted from previously mediated "spectacle" rather than from direct experience. (224)

Landsberg extends this line of thinking, offering an alternative to Jameson's "death of the real" by arguing "... what we have embarked upon in the postmodern is a new relationship to experience which relies less on categories like the authentic and sympathy than on categories like responsibility and empathy" (241). Examining the

Payne studies of film spectatorship, Landsberg emphasizes the ability of film spectatorship to decenter lived experience via a form of "emotional possession."[17] She concludes that ". . . the experience within the movie theater and the memories that the cinema affords – despite the fact that the spectator did not live through them – might be as significant in constructing, or deconstructing, the spectator's identity as any experience that s/he actually lived through" (242). Drawing out the implications of this approach, Landsberg surmises that "memories are less about authenticating the past than about generating possible courses of action in the present." Carrying these concerns to readings of *Total Recall* and *Blade Runner*, she notes that

> Any kind of distinction between "real" memories and prosthetic memories – memories which might be technologically disseminated by mass media and worn by its consumers – might ultimately be unintelligible . . . . Memories are central to our identity – to our sense of who we are and what we might become – but as [*Blade Runner*] suggests, whether those memories come from lived experience or whether they are prosthetic seems to make very little difference. Either way, we use them to construct narratives for ourselves, visions of our future. (244–245)

At the end of *The Interpretation of Dreams*, Freud similarly recognizes this process of construction; although dreams and memories remain his focus, he also places significant weight on the actions taken in response to such: to the way choices of response shape character formation in the individual (470–471). The final scene of *Inception* plays with a similar existential orientation. Here, *Inception*'s spectators are invited to read Cobb's shift of gaze from the totem to his children as a rejection of the passive narcissism invited by (and possibly inherent in) film viewing.[18] Approached in this manner, the ending of *Inception* constitutes a call to look beyond the mediascapes so pointedly circulated by the film. Specifically, the final scene with the top is built to make the audience self-conscious of its own failure to gain the break that Cobb appears to achieve. The sudden cut to the black screen prompts a visceral response, including to varying degrees laughter, grunts, groans, and snorts from the audience, and in this regard, the film's ending invites the spectators to repeat, in highly

compressed form and self-consciously, the struggle Cobb endures throughout the narrative.

Read in this manner, Cobb's reunification with his children depends on jettisoning the uncertainty associated with Mal, and is facilitated by a suicidal crises both modeled and promoted by Mal. The ontological instability associated with Mal is strong enough to raise questions about her status as a symbol of narcissism, and therefore her worthiness as a target for exorcism. In this sense, she may in fact embody not a woman, or even the feminine, but rather "those spaces which could be said to conceptualize the master narrative's own 'non-knowledge'" (Creed, "Gynesis, Postmodernism," 214). Building on the work of Alice Jardine, and particularly her notion of "gynesis," Barbara Creed explores this sense of "the unknown, the terrifying, the monstrous" as she examines contemporary science fiction film's fascination with, and horror of, women's bodies.[19] It may well be that Mal represents just such a traumatic space in *Inception* (a locus of uncertainty), and that this prospect haunts the final scene as spectators are captured by the top, which becomes a stranded object in a context where reality is simply presumed, at least by Cobb. The haunting by Mal, as projection and as totem, provokes both pleasure and anxiety, and these reactions derive to some degree from the portability that the top embodies. Landsberg speaks to this push-pull dynamic, noting that "the portability of cinematic images – the way we are invited to wear them prosthetically, the way we might experience them in bodily fashion – is both the crisis and the allure" (242). For much of *Inception*, Mal's totem is presumed to convey a unique bodily connection to reality. As a stranded object at the end of the film, it again provokes bodily reactions, this time in a manner that rethinks cinematic images not as representation but rather as event.[20] This shift emphasizes the choices and actions taken by the spectator, and as such responsibility weighs more heavily than authenticity.

Again, much turns on how Mal is understood. If her "real life" suicide is interpreted as a fear-induced shutting down of uncertainty (the recovery of an unquestionable reality in the face of sublime doubt), her action is easier to situate as a problematic, ultimately narcissistic attempt at control. If, on the other hand, the focus falls

on her "afterlife" as a projection and her import in the realm of mediascapes and cinematic creation, viewers might ask if her demands and questions merit more reflection than Cobb offers when he writes her off as merely a part of his own psyche. In this sense, Mal may present a symbol of portability itself. The agency suggested by her rebellion is the haunting trace that remains once Cobb uses suicidal dreams to distance himself from narcissism (to kill off parts of himself), but these actions do not ultimately provide a satisfactory engagement on Cobb's part with his responsibility for Mal's death. As much as the film's final shot speaks an anxiety about authenticity (Has Cobb made it back to reality?), the latent and more powerful question, buried in the film's manifest content, directs viewers to consider what Mal portends.

Derailing Plot, Reimagining Agency: *Looper* and the Time-Travel Paradox

Among science fiction films treating time travel, Rian Johnson's *Looper* has enjoyed a particularly favorable reception from audiences and critics alike.[21] As was the case with James Cameron's *Terminator*, part of this success may be traced to the way *Looper* enriches the typical time travel fascination with origins and primal scenes by compellingly engaging contemporary social issues.[22] In this regard, *Looper* engages its historical context by presenting a near future dystopian vision of America's heartland (Kansas), one that extrapolates from a variety of social trends shaping the time of the film's making: increasing economic inequity, the dismantling of the social safety net, the militarization of civil society post-9/11, and a multiplication of international military conflicts with increasingly opaque rationales. In particular, Johnson announces with the film's climax a deep interest in cycles of violence and narratives of origin. As is the case with *Inception*, parenting is deeply invested with a transformative potential, and suicide provides a mechanism for breaking with habits of thought and structures of emotion. In *Looper*, the climactic suicide is not survivable (a dream from which one wakes); instead, the film suggests that the suicide's sacrifice (a parental gesture)

allows the suicide to live on symbolically, through a boy who may escape entrenched patterns thanks to the self-sacrifice. As science fiction film criticism predicts, *Looper* makes much of oedipal conflicts, and poses a reconnection with mothers as a culminating (and in this case redemptive) drive, but *Looper* simultaneously undertakes trenchant social analysis, and explores the ideological dimensions of distinct notions of temporality (determinism, contingency) operating in the era of the film's production.

Looper is set in 2044, and offers a grim picture of the way neoliberal privatization might effectively eliminate the middle class and the institutions that support it. The protagonist, Joe, has experienced a horrific upbringing, but apparently not an atypical one. Born to a vagrant and addicted mother, Joe is abandoned – sold by his mother to a gang of panhandlers – before he can form a lasting visual memory of her (he remembers only the feeling of her hand running through his hair). Before long, Joe is recruited to become a looper by a crime syndicate boss from the future. Loopers are assassins who kill crime syndicate targets sent from 2074, a tactic made necessary because surreptitious body disposal is effectively impossible in the future. Time travel is limited to these criminal activities because the technology has been outlawed in the future. As a means of insuring that their activities remain concealed, the syndicate compels new loopers to sign a contract agreeing to kill their future selves should they ever be sent back to 2044 (thereby eliminating witnesses to the "disposal" process in the future). This time-delayed suicide is called "closing one's loop," and as the story unfolds, it is beginning to happen frequently. Joe learns that a new boss in 2074, the Rainmaker, has inexplicably overtaken the largest syndicates, and has ordered the closing of all the loops.

Once this context has been established, the film's timeline bifurcates. In one path, the older version of Joe is sent back from 2074 for successful execution by his younger self. In this timeline, Young Joe has grown into Old Joe, fallen in love, and married a woman whom he credits with redeeming his life. In the other timeline, Young Joe fails to kill Old Joe when he travels back to 2044. In this version, which is the focus of much of the film, Old Joe

escapes and is fixated on killing three children born on the same day in the same hospital, one of whom is likely to grow up to become the Rainmaker based on information Old Joe gathered in the future. Because the Rainmaker has been responsible for the killing of Old Joe's wife in 2074, Old Joe sees the child killings as a necessary means of saving her. Being a typically short-sighted looper, at least initially, Young Joe's only concern once Old Joe arrives and escapes execution is trying to set things right with his syndicate boss in 2044. Young Joe, therefore, dives into finishing the job of killing his older self.

In the process, Young Joe locates one of Old Joe's child targets and forms a complicated alliance with the mother and son, Sara and Cid, as he waits to ambush Old Joe once he arrives to execute the boy. As he waits, Young Joe becomes strongly attached to Cid, whom he increasingly sees as a younger version of himself, despite the boy's evolutionarily derived telekinetic abilities. In the meantime, Young Joe also becomes intimately involved with Sara, who doubles as his lover and as a strong maternal figure, a suggestion strongly reinforced as she runs her hand through Young Joe's hair at the end of the film. When Old Joe arrives and tries to execute Cid, Sara intercedes, using her body as a shield. As Old Joe is about to kill her to reach the boy, Young Joe (too far away to kill Old Joe) has an epiphany: he envisions Cid surviving and repeating Joe's life growing up motherless, but with telekinetic powers allowing Cid to effect the desire for revenge that is expressed only in unfocused and largely ineffectual ways in Joe's own life: he sees Cid becoming the Rainmaker. Explicitly desiring to end these cycles of violence, Young Joe abruptly turns his gun on himself, ending his own life in order to make Old Joe vanish before he can kill Sara and set Cid on a path toward a lifetime of violence.

Young Joe's suicide saves the mother-child relationship, but the act is also, as the film is structured, a product of a prosthetic maternal relationship imagining the mothering provided to his older self by Old Joe's wife. In the first scene in which Young and Old Joe converse – an exchange nostalgically set in a 1950s style diner – Old Joe describes the impact his wife had on his life:

OLD JOE . . . All I know for sure are two things: I know what's happening in my head. And I know that you're still going to meet her.

JOE Who?

[Old Joe takes out a POCKET WATCH, identical to Joe's. He opens it, and looks at a photo (which we cannot see) tucked into the lid.]

OLD JOE She's gonna save your life. (long beat) For a long time at the beginning she thought we'd have a baby. She would have been a great mother. She wanted that so much.

JOE She's. How is she, you said she's gonna save my life.

OLD JOE Your life. Let's look. At your Life. You're a killer and a junkie. And a fucking child mentality, "My life," "what's mine." Save your life, you're asking how? The question is why. Why would someone sacrifice a good life to love you?

JOE Alright cut the sanctimonious bullshit, my life is my own, I don't need it saved.

OLD JOE Shut your fucking child mouth. You're so self-absorbed and stupid, she's going to clean you up and you're going to take her love like a sponge and think maybe I'm clear of the past, maybe I'm safe.

Old Joe credits his wife with saving his life, but there is also a suggestion, reinforced visually with interwoven flash forward scenes, that she has birthed him into manhood, a transformation that appears to include an embrace by Old Joe of empathy and responsibility, as well as a rejection of violence. Conveyed in voiced-over exposition as Old Joe flashes forward, these aspects of Old Joe's transformation are even more strongly emphasized in the film's deleted scenes. For example, as his wife nurses Old Joe through addiction-related withdrawals, she bathes him as if he were a child.[23] Other deleted scenes include Old Joe throwing his guns into the sea after feeling the weight of his wife's disapproving gaze, as well as an argument in which she explicitly pleads with him to break with cycles of violence.

In the diner scene, Old Joe passes the seed of his wife's intervention to Young Joe, a potential realized full force with Young Joe's climactic epiphany. The story in the diner, then, invites a prosthetic maternal relation subsequently reworked as Sara and Young Joe interact. As was the case with Old Joe and his wife, Sara nurses him through his addiction withdrawals; through her commitment to her son, Sara also activates in Young Joe a sense of caring and kinship

otherwise overwhelmed by anger and narcissism since his abandonment by his mother. This association of Sara to Joe's mother is conveyed even more bluntly in a deleted scene in which Sara abandons a fetal-positioned, withdrawal-ridden Young Joe on a roadside, then relents and stuffs him back in her truck. The abandonment theme is further elaborated as Sara confides in Young Joe that she had abandoned Cid when he was an infant, explaining why he is confused regarding her status as his biological mother (Cid had taken his adoptive mother, Sara's sister, to be his biological mother). After the sister was murdered, Sara returned to raise Cid, and, as she tells Young Joe, her regrets for abandoning him converted to a deep commitment to protect and care for him. A key measure of Sara's success comes at the end of the film when Cid addresses her as "mother" after steadfastly refusing to do so before.

Crucially, as Sara conveys her story to Young Joe, she takes her analysis into a broader social register, noting that during her time away from Cid she encountered a generation of lost, abandoned men: having returned to Cid, her project is to save him from a social disease, the evidence of which she has seen first-hand. Young Joe's suicide demonstrates the degree to which he has come to share Sara's vision and social analysis. In saving Cid's mother, and thereby Cid's chances of breaking cycles of violence, Young Joe protects his surrogate, but the suicide is also a means of pushing back against the cultural and socioeconomic upheaval that created the lost generation identified by Sara.

Director Johnson has acknowledged the influence of other dystopian visions, including *Blade Runner* and *Children of Men* on his film, but in doing so he has emphasized his care in creating a distinct social context that dialogues in compelling ways with his characters, their conflicts, and the story overall.[24] In this vein, the rampant crime and violence that defines the social setting in *Looper* is constantly yoked to striking images of economic inequity. Recalling similar images in films such as *Children of Men*, these indications of devastating poverty amid tiny pockets of affluence at times literally arrest the story's action, as when Young Joe and a group of fellow joy riders screech to a stop just before their car hits a destitute child who seems

to represent an uncanny return of Joe, given their loaded, lingering exchange of looks. In socioeconomic terms, *Looper*'s 2044 realizes David Harvey's predictions regarding neoliberalism's propensity to concentrate wealth among a very few elites, leaving crushing poverty for the rest, and the eradication of the social safety net (another form of abandonment).[25]

In addition, Johnson has made *Looper*'s social vision unique by dissolving the distinction between the government, especially the police, and the crime syndicates. Although the film initially appears to assert this distinction, announcing that time travel has been outlawed in 2074, everything that viewers encounter in 2044 suggests that the police and crime syndicate are fully integrated: searches for Young and Old Joe are conducted with the seamless collaboration of these institutions, and the detective work by the syndicate thugs strongly mimics representations of police investigations from countless TV shows and films. Given the thorough and pointed dissolution of the border between these institutions (a dissolution accentuated in the deleted scenes), it is hard to imagine how there might be any effectual control of the crime syndicates beyond 2044. There is, however, little doubt about where things stand in 2044 Kansas: widespread state-sanctioned violence is the norm. For those who mete out the violence, particularly the loopers, the violence appears largely indiscriminant: the loopers arrive at an appointed time and place and kill hooded, anonymous victims from the future. The loopers are only supposed to learn if they have "closed their loop" (killed their older self) after the fact, when they receive a "golden parachute" reward. The militarization prominently featured in the images of state-sanctioned violence, including omnipresent helicopters, is freely turned on the poor and anyone who resists the state-turned-privatized syndicate.

Given Old Joe's efforts to kill the notorious Rainmaker as a child, and the apocalyptic destruction associated with the syndicate boss, it is not surprising that interviewers have asked Johnson if the film is inspired by a well-worn time travel question: If you could, would you travel back to kill a young Hitler before he could lead the Third

Reich into WWII? Johnson's response to his *Screenrant* interviewer, Perri Nemiroff, is instructive:

> It's weird, that's like the least interesting question to me. You're absolutely right that it's in there, but for me, I don't know, I couldn't imagine actually basing a movie on that conundrum. To me, the real question is not, "Would you go back in time and kill Hitler?" it's "If there was someone out there in the world right now whose existence threatened something you loved, would you allow yourself to kill or sit back and let them be killed in your name?" That, to me, is the more pertinent question and that's the more immediate question, I think. And, unfortunately, it's one that we actually have to deal with day to day. (Nemiroff, "*Looper* Interview")

Johnson's response directs readers to place the film's militarization – with its distinct collapse of criminal and state institutions – in a post-9/11 context where the divide between civilian and soldier has often broken down, and where warfare has taken a pronounced turn toward privatization (e.g., Blackwater USA).[26] Further, Johnson's answer suggests that Old Joe's hunting of the Rainmaker is analogous to the war on terror, and to the difficulty that has pertained to locating, isolating, and legitimating action against "terrorist enemies."[27] In this regard, Old Joe's pursuit represents the ultimate preemptive strike. In sum, the focus on 2044 gives Johnson an opportunity to highlight several especially charged questions regarding how current cycles of violence may evolve.

Most obviously, the analogy provides a fresh means of approaching the moral issues related to "collateral damage." As noted, the war on terror has brought renewed attention to such "damage" because of the difficulties of distinguishing presumed terrorists from civilians. As Johnson notes, Old Joe's internal struggles regarding the child assassinations invite the audience to consider a related state violence carried out in its name. The story's time travel context facilitates yet another powerful question: What makes a presumed terrorist? In targeting Cid as a child, Old Joe is attacking a potentiality. However, to carry out the assassinations, Old Joe must amputate any notion of contingency; he must embrace determinism and assume that Cid is fated to become the Rainmaker, wreaking havoc on 2074. Having spent time with Cid

and Sara, Young Joe sees the creative potential for Cid to become someone other than Old Joe's Rainmaker, so Young Joe's final act demonstrates a commitment to one type of temporal imagination (contingency) over another (determinism).

In *Postmodern Science Fiction and Temporal Imagination*, Elana Gomel has argued that science fiction (and postmodernist literature in general) grows precisely out of such experimentation with competing, ideologically loaded notions of temporality. Drawing on Brian McHale's argument that postmodernist fiction exhibits a strong proclivity to engage ontological questions, Gomel casts H. G. Wells' *The Time Machine* as a lodestar text because it explores competing time-scapes (or ontologies) in a new, highly influential way (Gomel, 18). Specifically, she traces three types of time-scapes through a wide range of subsequent science fiction. These three versions of the temporal imagination include determinism, contingency, and apocalypse (emphasizing plot, agency, and temporal suspension, respectively), and Gomel finds each at work in *The Time Machine*, such that Wells' text stands out as an original venture into the organizational logic that serves as a foundation for science fiction and postmodernist fiction (Gomel, 27–52). As is the case with *The Time Machine*, *Looper* is constructed to emphasize conflicts and possibilities among these different temporal worldviews, but the goal of this staging in *Looper* involves throwing a light on cycles of violence in particular (how they are maintained, how they are broken). Although Old Joe comes back in time in order to change history, spectators are invited to read Old Joe's actions through the framework provided by Young Joe's epiphany. In this context, Old Joe's desire to kill Cid is projected (somewhat counterintuitively) as a continuation of the violence marked by his wife's murder in 2074. Old Joe must adopt a deterministic approach to temporality to make the killing of the boy seem legitimate; here, following a preordained plot trumps other considerations, and as such, Old Joe is actually perpetuating violence rather than preventing it. The film appears to reinforce this notion by suggesting that Cid would escape whether or not Old Joe succeeds in killing Sara: the emphasis falls on the impact she could have on Cid's life if she were to survive.

By contrast, Young Joe embraces contingency and recognizes in Sara an agency that could positively impact Cid's development. Young Joe's climactic epiphany, in fact, has been anticipated in a crucial earlier scene as Young Joe himself threatens to kill Cid when he realizes that the frightened boy has enormous telekinetic powers and is already capable of killing. Confronting Cid after the boy has brutally killed a syndicate detective threatening his mother, Young Joe sees intense remorse in Cid's blood and tear-stained face. Recognizing something of his own violence-filled and vulnerable youth in Cid's expression, Young Joe literally embraces the boy and decides to protect the potential Cid holds to grow up differently, if with a caring parent. This reversal on Young Joe's part is all the more powerful because Cid's killing of the detective is truly horrific. Driven by a fear-induced rage, Cid uses his abilities to suspend the detective and all of the nearby objects in the air; time in this vicinity is slowed to a crawl as the detective's body begins to explode in ultra-slow motion, which suddenly gives way to a real time explosion that destroys a good part of the family's home. In this regard, the depiction of the killing invokes the apocalyptic temporality identified by Gomel, and effectively previews the reign of terror Cid could produce. Although this apocalyptic temporality haunts the film, giving rise as it does to the loopers' self-executions, the film devotes most of its energies to the struggle between determinism and contingency, and the corresponding notions of fate and agency. The dominant question posed by the film, then, is not can the characters write a different ending, but rather can the characters impact the course of the plot at all? To a significant degree, *Looper* answers this question by exploding the plot. Young Joe sees himself as a lynchpin in a chain of events that he rejects on behalf of those for whom he feels responsibility, including his surrogate child self. In this regard, he contributes to a collective agency with his death. What is striking, perhaps, is just how familiar this gesture has become in recent science fiction cinema, including *Twelve Monkeys*, *The Butterfly Effect*, *Donnie Darko*, and *Source Code*, all of which offer a version of suicide in association with time travel. These works may be evidence of a

generational shift in science fiction time travel films: whereas *Back to the Future* and the *Terminator* series seemed obsessed with primal scenes, these more recent films appear to be focused on the opposite end of life, and on suicidal dynamics in particular. In such instances, suicide or suicidal crises provide a means of derailing tyrannical, deterministic plots (literally envisioned as train travel in *Looper*) and foregrounding agency.

Overall, *Looper*'s visual style and especially its depictions of violence invite further reflection on the civil militarization that has defined the war on terror, inasmuch as spectatorship itself is interrogated in this social context. The film not only prompts viewers to identify with Young Joe – endorsing his suicide as a refusal of determinism – but also throws a critical eye toward its own play with mediascapes, and specifically its riffing with certain aspects of video gaming. In this vein, the film's costuming, locales, and weaponry recall various especially violent video games.[28] Spectatorship is, therefore, colored by the influences and agendas of the military entertainment complex extensively examined by Tim Lenoir and Henry Lowood among others.[29] This complex constitutes a collaboration of government and private entities that helped fill the gap in the United States as it shifted to volunteer military service, when certain forms of media indoctrination were strategically used to counter the loss of conscription (in particular, the explicit attempt to seduce potential recruits with wartime heroics and gaming violence largely divorced from consequence). At the same time, as Douglas Brown and Tanya Krzywinska argue, gaming is distinct from film because of the fundamental role it assigns to audience participation.[30] As a media form, gaming's logic is deeply bound to contingency, but games vary greatly regarding their conduciveness to challenge habits of thought (including cycles of violence). Part of what is striking about *Looper*'s gaming-inflected style is Young Joe's ability to take advantage of the rules (killing himself to disappear Old Joe) in order to reboot the program and begin building a new game: work that is largely handed to the viewers, who are tasked with speculating about the difference Sara will make in Cid's life.

Although the audience cannot be certain about Cid's alternate path, Sara's conviction and Young Joe's self-sacrifice offer hope, even in a world largely dominated by cycles of violence. This hope noted, Young Joe's suicide is certainly colored by the video gaming atmosphere cultivated in the film through prop selection, costuming, and characterization. In particular, this visual milieu invites viewers to compare *Looper*'s suicide to similar "strategic" suicides encouraged in a wide array of mainstream and independently produced video games (Kuo). For numerous commentators, the strategic use of self-inflicted death in video games cannot be separated from the general "cheapness" of death found in many games (Clements). Some researchers have gone so far as to suggest that the games may facilitate suicidal behaviors among some players because they undermine the connections between self-harming actions and consequences (Teismann, et al.); other commentators have noted that death in many games signals little more that temporary failure because affected characters are frequently immediately reincarnated (Kuo). Analyzed in this light, it may be easier to presume Young Joe is intended to live on through Cid, but at the same time, might the comparison to the video game conventions potentially cheapen Young Joe's sacrifice? The film appears to resist this possibility by emphasizing Sara's reaction to Young Joe's death, and in this regard, the film is in synch with experiments among video producers who are interested in developing more meaningful representations of death, ones that might offer players richer emotional and intellectual connections to characters. Along these lines, various recent games explore ways to build empathy and social responsibility, work that involves giving video game deaths more consequence that they have conventionally demonstrated (Campbell). Not surprisingly, such innovations have often gone hand in hand with increased opportunities for interactivity, a design shift that promotes awareness of contingency. Other games undertaking similar work have self-consciously mined the rules and mechanics of gaming in order to invite empathy for the ways dispossessed and disenfranchised people are manipulated by bio-politics (Gallagher). With both

kinds of gaming innovation, one frequently discovers a significant rethinking of video gaming death and strategic suicide. As is the case with *Inception* and *Looper*, this rethinking is guided by a commitment to consider suicide and suicidal crises in their social contexts, and often as sites of social agency.

CHAPTER 5

Environmental Adaptation

Creative Apocalypse in Margaret Atwood's Maddaddam *Trilogy*

> If we don't do maintenance work and minor improvements on whatever we actually have, things will go downhill very fast. So of course we should try to make things better, insofar as it lies within our power. But we should probably not try to make things perfect, especially not ourselves, for that path leads to mass graves.
>
> (Margaret Atwood, *In Other Worlds*, 95)

Initiated with an epigraph drawn from *Gulliver's Travels*, Margaret Atwood's completed *Maddaddam* trilogy is imbued with Swiftian satire, but in addition to providing a cautionary tale, these works (*Oryx and Crake*, *The Year of the Flood*, and *Maddaddam*) also constitute a prompt to consider future accommodation: how humans might adapt to an environment they have dramatically altered.[1] Deeply invested in challenging environmentally destructive habits of thought, these novels provide an imaginative venture into catastrophe, a speculation that itself represents an attempt to reshape cognitive and affective patterns through the reading experience. In this regard, Atwood is highly suspicious of certain forms of change, in particular utopianism, and this distrust takes center stage in the trilogy.[2] Most obviously, Atwood's critical approach to utopianism shapes her presentation of Crake, the architect of a bioengineered apocalypse who simultaneously unleashes a deadly virus and creates a new, radically "improved" humanity, the Crakers. However, Atwood also explores the appeal of utopian change to a variety of the trilogy's characters, and in tracking the role these characters play in facilitating Crake's plague, she queries a genre that has interested her since her doctoral studies (*In Other Worlds*, 77–85).

A proponent of more gradual and democratic change, Atwood turns to literature in part because it has the potential to reshape

cultural assumptions influencing many of her readers, including the "normalcy" of unchecked resource consumption, the privatization of government, and a blindness to the environmental impacts of widely used technologies.[3] Atwood's suspicion of utopianism is grounded in historical experience (Stalin's Russia, Hitler's Germany, and Pol Pot's Cambodia), and in the trilogy, her investment in gradualism translates into a predominantly critical approach to the theme of suicidal "rebooting" found in other speculative and science fiction, including Atwood's own earlier novel, *The Handmaid's Tale* (*In Other Worlds*, 83–84).[4] In this vein, Crake's murder of Oryx and his own "assisted" suicide mark an especially loaded moment in *Oryx and Crake*, and in the trilogy as a whole.[5] Specifically, Atwood situates the utopian model of change associated with Crake's suicide in a Malthusian context, one presuming that a significant loss of human life is probable, if not inevitable, due to overpopulation and its effects.[6] In what follows, I argue that Atwood strikes a productive tension in the trilogy between gradualist and catastrophic models of change, and that this project mines a Malthusian and utopian dynamic that has played a significant role in the modern environmental movement.[7] As such, the trilogy constitutes a mediating cultural form, what Atwood terms "ustopian literature" (*In Other Worlds*, 85–86). Exploring the gray areas between radical (utopian and dystopian) worldviews, this speculative form invites recognition of gradualist alternatives. Such alternatives are urgently needed in the world Atwood imagines, a setting in which brutal neoliberal trends have prompted a revival of the environmental movement's fascination with Malthusian solutions: sacrifices justified by utopian aspirations and dependent on an amputation of empathy. Ultimately, the trilogy documents the relative failure of Crake's utopian project, and in so doing, suggests a new way of reading one potential appeal of apocalyptic narratives.[8] Specifically, these stories, anticipating radical losses and profound grief, may hail (at least imaginatively) an empathy with the power to sustain environmental coalition and reform, and undermine the violence of Malthusian sacrifice attributed to actors like Crake. At a more basic level, Atwood suggests that narrative itself, especially in its more dialogic and collaborative

variations, is a fundamental part of humanness, and a key to human survival as we are forced to adapt to environmental changes that appear irreversible.[9]

Apocalyptic Repetition and Change

Atwood has described the narrative structure of the trilogy as a peace sign tipped on its side. True to this description, the first two novels (*Oryx and Crake* and *The Year of the Flood*) explore events taking place in roughly the same span of time, both works concluding with the same confrontation between the most benevolent and the most vicious of the pandemic's survivors. *Maddaddam*, in turn, carries the action forward from this same confrontation, and therefore suggests the long arm of the peace sign. However, Atwood also makes heavy use of flashbacks throughout the trilogy, so much so that these generate multiple story lines paralleling actions set in the present. Traversing the frequently sharp transitions among these time frames is part of the challenge and pleasure of this structure.[10] The narrative structure of the novels also solicits recognition of a certain circularity (the outer edge of the peace sign), inasmuch as they all culminate with confrontations among the human survivors (battles that by no means guarantee an end to violence). In this manner, Atwood has structured the trilogy in order to highlight a mediation between linear and circular modes of temporality. In a story about ultimate change, both repetition *and* change structure the ways that Atwood's narrators make sense of their world: narrative as a fundamentally human process undermines utopian aspirations.

Oryx and Crake conveys the pre- and post-apocalyptic lead up to its culminating confrontation from the point of view of Snowman, an unwitting accomplice of Crake's project. After the pandemic, Snowman finds himself the Crakers' only protector in a world he believes is devoid of other humans, at least for much of the novel. Mining a wealth of flashbacks to Snowman's pre-apocalyptic life (when he referred to himself as Jimmy), *Oryx and Crake* provides a sense of life in the affluent "gated" society of the corporate compounds, enclaves representing the collapse of government and

business into one entity: the "dream" of neoliberal privatization first unleashed in Pinochet's Chile, and woven into global politics by Ronald Reagan, Margaret Thatcher, and their counterparts in Russia and China.[11] In the trilogy, this collapse signals the demise of any separate power capable of holding accountable the societal forces driven by profit; no viable institution protects the greater good.

The Year of the Flood provides a view from the other, relatively impoverished side of the societal coin: what Atwood designates the "pleeblands." A chaotic zone of violence and disease with no signs of a government safety net (much akin to the world of *Looper*), the pleeblands are home to a fringe religious group, God's Gardeners, whose environmentalist and survivalist ethic are largely tolerated by the authorities because of the group's apparently inconsequential numbers and influence. Narrated by two members of this religion, Toby and Ren, this novel offers a primer for post-apocalyptic survival inasmuch as it documents a wide variety of the group's preparations, especially practices that rigorously avoid dependence on manufactured resources, including processed food, medicine, clothing, electronics, and so on. Tensions evolving from the group's fatalistic belief in catastrophe ultimately lead to a splintering, and the creation of an offshoot: an "active resistance" group calling itself Maddaddam. When *Oryx and Crake* and *The Year of the Flood* intersect at their conclusions, Toby and Ren are attempting to rescue another member of God's Gardeners, Amanda, from Painballers – murders, rapists, and cannibals who are the product of multiple extremely violent incarcerations by the corporation-government. Snowman stumbles upon this rescue in progress, and both novels end with the prospect that most, if not all, of the survivors might perish.

As noted, the final novel of the trilogy, *Maddaddam*, takes up this confrontation (in which no one is killed, but the Painballers escape) and extends the narrative to another, culminating battle with the Painballers, all the while mining flashbacks that reveal the ways in which Crake was able to coerce members of the Maddaddam group into assisting his apocalyptic project. Focalized primarily through

Toby and Zeb (a prominent participant in the Maddaddam splinter group and Toby's romantic interest), the novel offers evidence of the ways that Crake's attempt to "improve" humanity has been compromised and reworked as the Crakers hybridize, culturally and biologically, with the surviving humans. Driven by an insatiable sense of wonder, the Crakers incessantly manipulate language, and through imitation learn to write and build narratives. In this manner, they are deeply influenced by their human mentors, developing the penchant for abstract thought that Crake so desperately attempted to weed out of their being. In sum, the Crakers are an embodiment of repetition and change, one that testifies to the power of adaptation despite Crake's radical genetic manipulations.

Malthusian Sacrifice

Although none of the novels offers significant focalization through Crake's point of view, *Maddaddam* does provide something of a genealogy for the pandemic: the various events, ideas and influences that make this trajectory conceivable. Aware that his father was killed by his employers for threatening to reveal their engineering of profitable diseases, the young Crake (then called Glenn) develops connections with others resisting the corporation, including one of his father's coworkers, Pilar. Having defected to the God's Gardeners carrying smuggled, especially virulent disease prototypes, Pilar asks that the sample be passed to Crake at her death, a request that the leadership council of the God's Gardeners respects even though they realize the devastating impacts the virus might have in Crake's hands. Given the God's Gardeners' commitment to avoiding violence, the decision to relinquish control of the virus might seem contrary in the extreme, were it not for the group's Malthusian fatalism. Toby addresses this issue when she asks Zeb if Pilar anticipated how Glenn/Crake would use the virus: "'Let's put it this way,' says Zeb. 'All the real Gardeners believed the human race was overdue for a population crash. It would happen anyway, and maybe sooner was better'" (*Maddaddam*, 330). Ironically, Zeb, the God's Gardener most inclined to promote violent self-defense, is

the only member of the group's leadership council to object. Zeb's fears are realized when Crake subsequently modifies the virus and secretly markets and distributes it on a global scale, ensuring the death of almost all of humanity.

Maddaddam also provides insight regarding Crake's plan through his manipulation of Jimmy. Although Crake does not share his actual plans for the pandemic with Jimmy, he does present his friend with a variant Malthusian-inspired plot, claiming that his secret dosing of the global population will only lead to mass sterilization. Jimmy's acquiescence in the face of Crake's announced plan reinforces the sense that some sort of Malthusian catastrophe has become a repressed yet undeniable cultural logic in the future presented by Atwood's trilogy. Acknowledging this logic in no way implies that Atwood accepts such an inevitability, and *Maddaddam* in particular provides ample evidence that Crake operates with a fundamentally limited sense of what distinguishes humanity, and of its capabilities. Crucially, adaption, evident everywhere in the novel as the Crakers hybridize, reveals an alternative to the self-destructive utopianism (radical rebooting) that Crake engineers.

The limits of Crake's understanding are evident in the "improvements" he bestows on the Crakers, and most critical in this regard is his attempt to free them from abstract thought (including religion, and death as a fearful prospect), an undertaking that combines cultural and biological manipulations, including a genetically set thirty-year life span that Crake believes will make concerns about aging and death irrelevant. In fact, many aspects of the Crakers' improvements constitute rearticulations of the twentieth-century Malthusian project, and Paul Ehrlich's work in particular, including his *The Population Bomb* (1968), which played a key role in popularizing the mindset. In the book, Ehrlich predicted humanity's self-destruction brought about by three primary forces: (1) foremost, humanity's nearly constant drive to reproduce, which is reinforced by myriad cultural factors, including self-esteem, religious beliefs, social relations, and identity formation; (2) advances in medicine extending life spans; and (3) a violation of the Earth's "carrying capacity," especially in terms of agricultural production. Inasmuch

as the Crakers' supposed improvements address these issues precisely, they invite readers to associate Crake's assessment of humanity with Ehrlich's.

Responding to the first of these concerns, Crake has rewired the Crakers' reproductive process to follow seasonal patterns. As is the case with most other mammals, mating occurs only when bodily changes indicate a window of fertility. In the case of the Crakers, attraction is driven by color changes in certain parts of the body; four Craker males mate with each female in heat, thereby putting an end to patrilineal inheritance, and, ironically, "forefathers." As a result, many of the cultural factors influencing reproduction that concerned Ehrlich are greatly diminished or eliminated. Likewise, Crake addresses the impacts of medicine by limiting the Crakers' life span, but also by providing them with enhanced immunity, and an ability to self-heal by purring over injuries. Finally, the agricultural concerns evident in Ehrlich's analysis are addressed as the Crakers are designed to eat rough vegetation found in abundance in the wild. Also designed to consume their own bodily waste to enhance nutrient intake, the Crakers represent the epitome of efficient consumption.

Because Atwood elected not to provide extended access to Glenn's/Crake's point of view, his character requires a different kind of imaginative investment, one that perhaps more powerfully invokes his assessment of humanity because readers have to participate actively in recreating it. This point noted, Crake is by no means a cipher, as the apparent debt to Erlich demonstrates. Also, the impunity with which the corporation operated as it killed his father could understandably make radical action appear the most viable course to follow. Perhaps harder to assimilate is Crake's decision to undertake a murder-suicide, knowing as he does that his Crakers are unlikely to survive without someone to guide them out of the Paradice dome where they have been developed and protectively isolated. Although Jimmy does not initially realize the extent to which he is being manipulated by Crake as the murder-suicide takes place, Jimmy's revisiting of these events at the end of *Oryx and Crake* sheds considerable light on Crake's intentions.

The Blinded Accomplice: Willful Denial, Strategic Manipulation

Over the course of *Oryx and Crake*, numerous flashbacks offer background for Jimmy and Crake's relationship. Meeting as teenage boys living in the same corporate compound, they form a friendship that is more significant than their primary activities together (surfing porn sites and playing online games) might suggest. In this vein, when Jimmy's mother abandons her family, Glenn consoles Jimmy by suggesting he too was abandoned by his father. Seizing the opportunity, Jimmy queries Glenn about his father's death and, for the readers at least, it becomes apparent that Glenn has seen through the fake suicide; as he tells Jimmy, his father "was acting worried lately, but he didn't have *problems*. He had nothing like that on his mind. Nothing like jumping. I'd have known" (*Oryx*, 183). When Jimmy refuses to connect the dots, Glenn eases Jimmy away from the prospect of a murder conspiracy by offering, with an odd smile, that his father was "kind of uncoordinated," as if this would explain his fall from an overpass into traffic. Reflecting on this exchange in the post-apocalyptic setting, Jimmy-become-Snowman marvels at his own initial denial: "There had been something willed about it though, his ignorance. Or not willed exactly: structured. He'd grown up in walled spaces, and then he had become one. He had shut things out" (*Oryx*, 184). Although Jimmy's assessment appears accurate, the reinterpreted episode also conveys a depth of awareness by Glenn, who manipulates Jimmy's emotional limits in order to accommodate his own long-range plans.

Their divergent academic skills translate to very different college experiences for Glenn and Jimmy (the former attends the affluent science-oriented Watson Crick Institute, while the latter enrolls at the econo-class humanities option, the Martha Graham Academy). Despite their distinct paths, Glenn continues to cultivate the relationship, and to this end, he arranges for Jimmy to join him at Watson Crick. During this trip, Glenn reopens the topic of his father's suicide (211); here again, Glenn takes Jimmy to the limits of his

coping abilities by suggesting that Jimmy's mother abandoned him because, like Glenn's dad, she had learned of the corporation's secret activities and wished to be no part of them.

After their college graduations, the two have little contact until news circulates that Jimmy's mother has been captured and executed for treason (258). Her apparent radicalization lends credence to Glenn's earlier speculations, and news of her death sends Jimmy into an existential tailspin that Glenn-now-Crake exploits by offering Jimmy his condolences and a new job. Specifically, Crake recruits Jimmy to create an ad campaign for BlyssPluss, a drug designed by Crake supposedly to improve sexual experience while providing guaranteed disease protection and prolonged youth. In pitching the job to Jimmy, Crake reveals a secret Malthusian-inspired component of the drug, one that he claims will render its users permanently sterile. As Crake describes his intentions, the drug's aim is population stabilization, not annihilation: "This [sterilizing] effect could be made reversible, though not in individual subjects, by altering the components of the pill as needed, i.e., if the population of any one area got too low" (*Oryx*, 294). Crake justifies the coerced sterilization by noting,

> I've seen the latest confidential Corps demographic reports. As a species we're in deep trouble, worse than anyone's saying. They're afraid to release the stats because people might just give up, but take it from me, we're running out of space-time. Demand for resources has exceeded supply for decades in marginal geopolitical areas, hence the famines and droughts; but very soon, demand is going to exceed supply *for everyone*. (*Oryx*, 294–295)

Crake's sterilization program is chilling in part because it recalls Paul Ehrlich's speculations regarding the efficacy of secretly adding contraceptives to public water supplies, but of course Crake's true intentions are eventually revealed to be even more dire.

Even as Crake introduces his secret project in its diversionary, "diluted" form, Jimmy foresees the insufficiency of coerced sterilization, and by extending the logic of Crake's approach, Jimmy inadvertently anticipates his more radical action. Challenging the notion that population control is in itself a panacea, Jimmy asks Crake,

"What if the fewer people are very greedy and wasteful?" In a loaded moment, Crake answers simply, "They won't be." In retrospect, Snowman grasps the significance of Crake's certainty, given his designing of what he believed would be the inheritors of humanity, but even in the post-apocalyptic context, Snowman recognizes the willed ignorance that kept him from putting together the pieces. In fact, Jimmy's initial denial is essential to Crake's murder/suicide plan, inasmuch as Crake relies on Jimmy's spontaneous emotional response to Oryx's death at Crake's hands to provoke his own killing. Crake exorcises abstract reflection by taking himself and Oryx out of the picture (along with most of the planet's population); in the process, he ensures that the supposedly single survivor will be so traumatized that all he can muster are the reactive emotional responses Jimmy has been cultivated to undertake. Analysis of the murder-suicide, including its preparation and aftermath, sheds light on Crake's intentions, while also clarifying the ways in which Crake's "rebooting" began to fail almost immediately.

At the height of the pandemic, Jimmy seals himself into the Paradice dome with the Crakers, making good on a promise to Oryx to protect them should anything happen. Jimmy then makes contact with Crake, who ominously announces that everything is under control. When Crake arrives at the Paradice dome, Jimmy hesitates to grant him access for fear of contaminating the Crakers. Crake reveals that he has played a role in creating the pandemic by announcing that he has preemptively immunized Jimmy. Emphasizing that both he and Oryx are injured, Crake convinces Jimmy to open the dome's airlock, whereupon Crake tells Jimmy "I'm counting on you" before he kills Oryx by slitting her throat (329). Jimmy, who has been romantically involved with Oryx, immediately responds by shooting and killing Crake.

In the midst of recalling these events, Snowman asserts the following: "*We understand more than we know*" (italicized in the original, 328). In fact, both Oryx and Crake provide hints that something like a murder-suicide might come; in this light, Jimmy's belated revelation may be an attempt to come to terms with the responsibility he bears for (actively) not seeing beyond his narrow concerns and habits

of thought. Jimmy-become-Snowman's own repeated passages through suicidal crises (344) may account in part for his ability to bring greater critical distance to, and awareness of, his participation in Crake's plans, but, at least initially, the only audience he can imagine for his suicide is Oryx and Crake, and the prospect of their "disappointment" (Oryx) and "amused contempt" (Crake) derails action on Jimmy's part. Even in death, Oryx and Crake exercise considerable power over Jimmy.

Well before the murder-suicide, Jimmy has a strong sense of being manipulated by Crake. This intuition carries over to Jimmy's affair with Oryx, who has been in a complicated relationship with Crake since Jimmy first met her. At various points, Jimmy assumes that Crake must know about their liaison, but he cannot understand why Crake would tolerate such; in fact, the affair prepares Jimmy for his part in Crake's suicide. As teenagers, Glenn and Jimmy had first encountered images of Oryx as a child on a porn site, and Crake was aware of Jimmy's continuing obsession with her image. It seems, then, that Crake put Jimmy in close contact with Oryx to ensure an emotionally driven reaction to Oryx's murder, a reaction effectively divorced from consideration of Crake's larger plan. Acknowledging "[t]here were signs . . . . [t]here were signs and I missed them" (320), Snowman focuses on two exchanges with Crake. In the first, Crake asks Jimmy if he would kill someone he loved to spare them pain. Jimmy does not offer a categorical affirmation or rejection of euthanasia, but instead asks Crake, "What kind of love, what kind of pain?" (320). Although Snowman only realizes the significance in retrospect, his oldest and closest friend is testing his murder-suicide plans on Jimmy. In the second exchange, Crake tells Jimmy that he will be in charge of the Crakers should anything happen to him. Jimmy balks, noting that Oryx knows the Crakers far better than he does. Crake's response all but announces the murder-suicide plan: "'If I'm not around, Oryx won't be either,' said Crake. 'She'll commit sutee? No shit! Immolate herself on your funeral pyre?' 'Something like that,' said Crake, grinning" (321). This passage is immediately followed by another recollected conversation, this time between Jimmy and Oryx. Again Atwood emphasizes Jimmy's self-limited

comprehension as the murder-suicide approached. Here Oryx dismisses Jimmy's concerns about Crake's jealousy by insisting that Crake's focus is of a higher order, a point she reinforces by lending her own support to Crake's Malthusian motivations: "He has found the problems. I think he is right. There are too many people and that makes the people bad. I know this from my own life, Jimmy" (322). As this conversation continues, Oryx elicits a crucial commitment from Jimmy:

> "If Crake isn't here, if he goes away somewhere, and if I'm not here either, I want you to take care of the Crakers."
>
> "Not here? Why wouldn't you be here?" Anxiety again, suspicion: were they planning to go off together, leaving him behind? Was that it? Had he only been some sort of toy-boy for Oryx, a court jester for Crake? "You're going on a honeymoon, or what?"
>
> "Don't be silly, Jimmy. They are like children, they need someone . . .."
>
> "Okay then. Cross my heart and hope to die . . . " (*Oryx*, 322)

This passage suggests that Oryx could have been a willing participant in the murder-suicide. Even with the benefit of hindsight, Snowman cannot admit such to himself, but his obsession with this prospect – "What did she have in mind? Snowman wonders, for the millionth time" (323) – reveals a proximity to a knowledge that he still actively represses. In fact, the recollection of the whole exchange is deeply marked by his blinding fear of losing Oryx: "At least he hadn't completely blown it: she wasn't angry with him. That was the main thing. What a mushball I was, thinks Snowman. How entranced. How possessed. Not *was*, *am*" (322).

Empathy, Interconnection, and the Prospect of Loss

Jimmy's refusal to connect the dots reflects a propensity toward denial manipulated by Crake, but his disbelief regarding the callous and wantonly brutal nature of Crake's plans also represents the continuing human quality of empathy in Atwood's post-apocalyptic world. On the most basic level, Crake's murder-suicide constitutes a final step in the termination of one phase of humanity; at the same

time, and with Oryx, he believes it necessary to install a transitional guardian. Readers are thus invited to wrestle with the question that wracks Jimmy/Snowman: Why him? Crake somewhat jokingly notes that Jimmy would be better than any scientist at communicating with the Crakers because he can understand their rudimentary thinking. But more significantly Jimmy's life has followed a distinct pattern of aborted relationships that may, in Crake's view, make Jimmy ideal for developing an empathetic, but not too empathetic, relationship with the Crakers (321). Crake desires protection for the Crakers, but provided by someone who will maintain enough distance to avoid passing along the problematic aspects of humanity that they were built to transcend, including abstract thought in particular. A deeply traumatized Jimmy fits Crake's plans because his capacity for empathy is checked by a history of abandonment: his mother's departure, his cultivation then destruction of myriad romantic relationships, and finally the loss of Oryx and Crake, a loss for which he bears some responsibility. This particular combination (empathy, abandonment, trauma) promises a measured, not-too-empathetic relation with the Crakers, at least as Crake foresees matters. As Atwood emphasizes, Crake underestimates the impacts of the language, and narration in particular, that Snowman and the Crakers depend upon as they acclimate to the world they have inherited.[12]

If *Oryx and Crake* sets a context for why Snowman was chosen to serve as the guide and protector of humanity's next iteration, the subsequent novel in the trilogy, *The Year of the Flood*, provides the story of a wholly different empathetic force that deeply shapes the Crakers. This examination of God's Gardeners is organized around two points of view: Toby, who falls under the protection of the group when its leader, Adam One, saves her from a murderous, sexually abusive employer, and Ren, who is thrust into the God's Gardeners when her mother abandons her corporate compound to follow her lover, Zeb, back to the group. Although Ren offers a rich view both of daily life in the religion, and of its lasting impacts on her once her mother drags her back to the corporate compound, Toby's more adult perspective yields many of the novel's

farthest reaching insights about the group, because she is a more skeptical member, and because she is ultimately convinced to accept a leadership role giving her access to the inner workings of the religion.

When Toby expresses her doubts about the value of some of the group's more explicitly religious activities, its leader, Adam One, pulls back the rhetorical curtain, acknowledging his own willingness to exploit humanity's "habit" of religious thinking in order to achieve his pragmatic goals:

> "The truth is," he said, "most people don't care about other Species, not when times get hard. All they care about is their next meal, naturally enough: we have to eat or die. But what if it's God doing the caring? We've evolved to believe in gods, so this belief bias of ours must confer an evolutionary advantage. The strictly materialist view – that we're an experiment animal protein has been doing on itself – is far too harsh and lonely for most, and leads to nihilism. That being the case, we need to push popular sentiment in a biosphere-friendly direction by pointing out the hazards of annoying God by a violation of his trust in our stewardship."
>
> "What you mean is, with God in your story there's a penalty," said Toby.
>
> "Yes," said Adam One. "There's a penalty without God in the story, too, needless to say. But people are less likely to credit that. If there's a penalty, they want a penalizer. They dislike senseless catastrophe." (*Flood*, 241)

In fact, the larger ecological narrative conveyed by God's Gardeners does not require metaphysical explanation because it maps so thoroughly onto an easily recognizable environmentalist critique of humanity's destruction of the planet. Global warming, rampant species extinction, the poisoning of water and land with pesticides and toxic chemicals all provide a material basis for the disaster predicted by the God's Gardeners, a catastrophe that shapes all aspects of their lives as they prepare, in very practical terms, to weather the storm.

Similarly, the religion does not prophecy a revelation with the coming disaster. Instead, the members consider themselves stewards of an existing knowledge. Adam one summarizes this understanding

in a sermon, noting "'. . . we Gardeners will cherish within us the knowledge of the Species, and of their preciousness to God. We must ferry this priceless knowledge over the face of the Waterless Waters [of the Waterless Flood], as if within an Ark'" (*Flood*, 91). And to the extent the God's Gardeners seek election (being among the "chosen" survivors), it is readily apparent that their preparations will make the difference, a point Atwood develops with humor as she frequently concludes the God's Gardeners' sermons with reminders about sunscreen and the benefits of hats. In this regard, survival turns on finding sustainability in one's environment, and achieving such has everything to do with recognizing the constitutive interdependency among species. In this regard, the God's Gardeners foster an extended notion of empathy by bringing together religious narratives and ecological approaches to daily life. The religious component takes the form of apocalyptic prophecy (a waterless flood), a staging of radical loss that has the power to disrupt fundamentally the habits of thought facilitating humanity's irresponsibility toward the environment, and ultimately humanity's own sustainability.

In *Precarious Life*, Judith Butler suggests that shared empathetic experiences of grief and loss have the potential to ground political coalition, in large part because these disruptions provide insight regarding the ways people are inextricably and fundamentally constituted by others. Butler's emphasis falls on the insights gained when we lose other people who quite literally make us what we are, but the impact of losses, including anticipated losses, can certainly be extended to other kinds of life (other species, even the biosphere itself); the God's Gardners have built their religion to have this "transformative environmental" effect, its central narratives promulgating empathetic connections by focusing on losses extant and anticipated.[13] These aspects of loss, grief, and associated empathy address a shortcoming evident in much environmental policy, which tends to focus on "'end-of-the-pipe' outputs of environmentally destructive behavior" (Heinzerling, 1421); instead, the transformative approach (represented by the God's Gardeners, but applicable to the trilogy overall) emphasizes the destructive

"inputs": "the individual attitudes, habits, and behavior that lead us all to want and demand things that necessitate environmental damage."[14]

The core narratives of the religion generate this empathy while strongly echoing the central ideas of the modern environmental movement. As Thomas Robertson notes, "the idea of interconnection was . . . a core tenet of ecology, the subset of biology that informed much of the post-war environmental movement" (xiii). Although this ecological approach had been prominent in related sciences for some time, the notion of "domino effects" produced by pesticides like DDT did not come to the fore of public attention until the publication of works such as Rachel Carson's *Silent Spring* (1962), and the massive demonstrations associated with the first Earth Day events (1970). As Robertson demonstrates, the popular development of this interconnectivity approach was influenced by international relations, and specifically by post-war arguments against U.S. isolationism. Both Dwight Eisenhower and Lyndon Johnson had argued that the United States was subject to a "basic law of interdependence" as it negotiated pressing international issues (Robertson, xii), and popular news sources such as *Time* magazine were also drawing explicit parallels between the domino theory in cold war politics and environmentalism.

Robertson's study, *The Malthusian Moment: Global Population Growth and the Birth of American Environmentalism* (2012), is rich for the ways it explores the interplay of international affairs and the development of the environmental movement, particularly because he finds both deeply impacted by concerns regarding population dynamics. In the process, Robertson maps an expansive Malthusian influence on mid-twentieth-century popular culture, one that was parlayed into an explanation for just about every social ill that could be identified. Poverty, malnutrition, war, racial conflicts, environmental degradation, resource exhaustion and communism were all social traumas identified by Malthusians as the results of dramatic increases in the global population. Without question, the global population was growing at an astonishing rate through the twentieth century, but as Robertson notes, the contemporary Malthusian way

of thinking had serious flaws that would lead to a sharp decline in its support after the 1970s:

> Ignoring or downplaying causes such as colonialism, capitalism, poor government, local exploitation, and individual failings, many environmental Malthusians reduced poverty and other complicated socioeconomic dynamics to a simple factor of population, in effect blaming the poor for their own poverty .... These flaws became far more obvious in the early 1970s when the collapse of the Cold War consensus opened up more space on the left and right of the political spectrum, and America gained a far more complicated understanding of poverty and the way it overlapped with race and gender hierarchies. Not coincidentally, this was just as environmental concerns about population were peaking; reaction against environmental Malthusian extremism helped spur new understandings about race, class, and gender power dynamics. (Robertson, 10–11)

Atwood's trilogy mirrors this environmental history, as well as Robertson's analysis. In particular, Atwood draws a crucial distinction between an environmentalism built on notions of interconnectivity (including creative collaboration), and an alternative version drawing inspiration from Malthusian fatalism. In this vein, *The Year of the Flood* emphasizes the degree to which the God's Gardeners may seem to fit the former model, and yet as *Maddaddam*'s readers learn, most of the religion's leadership succumb to determinism when they vote to give Glenn a sample virus. In this regard, the trilogy maps and responds to debates that shaped the evolution of environmental activism, and that continue to influence environmentally oriented dystopias.

Crucially, neither Toby nor Ren take part in the decision to hand the virus to Glenn. Instead, their reflections on the religion stress a reverence for life and the interdependence of species and individual humans, an approach reinforced as *The Year of the Flood* builds toward a climax around the rescue of a former God's Gardener and Ren's closest friend, Amanda, who has earlier in the novel saved Ren's own life. Add to this dynamic Toby's part in rescuing both Amanda and Ren, as well as Toby's rescue from her murderous employer, and one gets a sense of the ways Atwood's novel places great weight on mutual dependence and empathy. In sum, Atwood's

representation of the God's Gardeners stresses the value they place on interconnectivity. Recognizing this investment by the God's Gardeners, the revelation about their role in the pandemic at the close of the trilogy comes as a shock, one that compels readers to look back over the trilogy in order to examine the play of deep-seated cultural logics.

The prevalence of self-interest and a profit-above-all ethic in the larger society are well documented in the trilogy's first two novels; these are credited with accelerating government's privatization, and with the death of dissent. Taken together, these factors provide some explanation for why Crake and the God's Gardeners might embrace such radical measures as the plague. With little prospect of political change, Crake pursues a path well known to the powerless: he turns the master's tools against the master. Specifically, his system for delivering the plague replicates the same mechanisms of marketing that Crake's father died fighting. But Crake goes beyond targeting the corporate organization of power. His bioengineered reboot of humanity as a whole presumes that the corporation's self-destructive qualities are an expression of humanity's hardwired (genetic) flaws (*Oryx*, 228). Crake's "fix" (the Crakers) represents a material solution, one foregrounding the efficacy of bioengineering and conceiving of culture as a problem best managed if dramatically restrained: hence Crake's goal of minimizing or eliminating abstract thought that might foster religion, romance, empathy, and so on. Ultimately, this project fails because Crake underestimates the power of grief and loss to propel the very modes of mental and affective activity he desperately wishes to amputate: he cannot stop the narratives the Crakers insist upon for negotiating not only the endless dead they encounter when leaving the Paradice dome, but also the deceased Oryx and Crake.

Wonder and Narrative Adaptation

The prospects for humanity's survival are far from clear as *Maddaddam* ends, but the utopian design of the apocalypse foregrounds particular questions, including what will come of Crake's

efforts once the Crakers intermingle (physically and culturally) with the other survivors? As Atwood tackles this last question in *Maddaddam*, she throws increasing focus on the narratological self-consciousness of her characters. In trying to free the Crakers from symbolic forms of thought that might lead to religious, interpersonal, and/or ideological conflicts, Crake built a minimalist culture for them, one that maintained strict adherence to literal meanings. But there were certain qualities that Crake could not stamp out of the genetic coding without producing humanoid "vegetables," and in this regard, Atwood suggests that a resiliency against Crake's manipulations is evident in the ways the Crakers quickly develop elaborate symbolic thought when exposed to Toby and the other survivors. In this vein, Atwood implies that humanity is deeply and genetically bound to a sense of wonder (which the Crakers exhibit in abundance), and that the drive is linked in crucial ways to notions of temporality in narrative. In this vein, Atwood has noted that narrative may represent a trait favored by natural selection, and in *Maddaddam* this genetic resource is credited with undermining Crake's mastery of humanity, and maintaining an adaptability necessary for successfully negotiating the post-apocalyptic world.[15]

Despite Crake's efforts, the Crakers are obsessed with stories of their origins, including narratives that confer meaning on the many dead they encounter as they leave the Paradice dome. Initially insisting on the ritualistic presentation of these stories, the Crakers ultimately undertake their own process of narration in *Maddaddam*, with one Craker in particular, Blackbeard, leading this process by learning to read and write from Toby. This process culminates when Blackbeard assumes the narrative voice of the novel at its conclusion. To the prospect of future genetic manipulation of humanity, Atwood holds up a "check" of sorts, inasmuch as humanness is indelibly linked in the trilogy to temporality, encoded in language and narrative. Narrative, in turn, offers a venue for conceptually and affectively negotiating both wonder (a motor for adaptation) and the sublime (the prospects of creation and death).

In this regard, the most obvious way that Crake's radical "reboot" project is undermined is through storytelling. As Snowman tells

Toby, the Crakers insisted on explanations regarding the many dead they encountered when they emerged from the Paradice dome, and regarding their origins, including the disappearance of Crake and Oryx. Immediately upon encountering the world beyond the dome, the Crakers feel compelled to develop narratives that might grant meaning to losses. Snowman attempts to protect the Crakers' innocence by fashioning stories that deify Crake and Oryx, but this effort becomes increasingly fragile as the Crakers gain experience of their post-apocalyptic setting. When Jimmy is unable to continue as the Crakers' storyteller due to illness, the Crakers draft Toby into the role, a function she is willing to serve because reinforcing the storytelling relationship will keep the Crakers close, allowing Toby and peers to protect them from the Painballers. Toby's storytelling is thus marked by related impulses: developing affective bonds and communicating warnings through recounting.

Reflecting on this power to reanimate the past through narration as she reviews the journals she wrote while isolated during the height of the pandemic, Toby asks herself "Is that what writing amounts to? The voice your ghost would have, if it had a voice? If so, why is she teaching this practice to little Blackbeard? Surely, the Crakers would be happier without it" (*Maddaddam*, 283). Near the end of *Maddaddam*, as Toby reflects on the burials of Adam One and Jimmy after the climactic battle with the Painballers, Blackbeard comes upon Toby as she adds to the story of this new community

> "Oh Toby, what have you been writing?" says Blackbeard . . ..
>
> "I am writing the story," she says. "The story of you, and me, and the Pigoons, and everyone. I am writing about how we put Snowman-the-Jimmy and Adam One into the ground, and Oates too, so that Oryx can change them into the form of a tree. And that is a happy thing, isn't it?"
>
> "Yes, it is a happy thing. What is wrong with your eyes. Oh Toby? Are you crying?" says Blackbeard. (*Maddaddam*, 374)

Ultimately, Toby cannot continue the writing (mourning Zeb's disappearance and likely death, she takes her own life), and Blackbeard becomes the narrator not just of the story within the novel, but of *Maddaddam* itself. But before this transition takes place, Toby offers a new origin story for the Crakers, one that conveys both Crake's

fallibility, and Oryx's unique role as the provider of language and the protector of singing, even against Crake's wishes.

> Then Oryx made a new kind of thing, called singing. And she gave it to you because she loved birds and she wanted you to be able to sing that way as well. But Crake did not want you to do the singing. It worried him. He thought that if you could sing like birds you might forget to talk like people, and then you would not remember him or understand his work – all the work that he had done to make you.
>
> And Oryx said, You will just have to suck it up. Because if these people cannot sing, they will be like . . . they will be like nothing. They will be like stones. (*Maddaddam*, 290)

This multiplicity of collaborating voices stands in stark contrast to the remainder of Toby's story, which details "the great rearrangement," or pandemic. Here Toby presents a speculative rationale for Crake's unleashing of death.

> This is what he thought:
>
> The people in the chaos cannot learn. They cannot understand what they are doing to the sea and the sky and the plants and the animals. They cannot understand that they are killing them, and that they will end by killing themselves . . ..
>
> So there is only one thing left to do. Either most of them must be cleared away while there is still an earth, with trees and flowers and birds and fish and so on, or all must die when there are none of these things left . . ..
>
> But shouldn't you give the ones a second chance?, he asked himself. No, he answered, because they have had a second chance. They have had many second chances. Now is the time.
>
> So Crake made some little seeds that tasted very good . . .. But then those who ate the seeds would become very sick, and would come to pieces . . .. (*Maddaddam*, 291)

Crake is credited in this account with adopting something like a homeopathic treatment of humanity's suicidal impulses: he treats the disease with the disease in the hope of generating something new. It is especially telling that this portion of the origin story is both more univocal and more formally offset than the rest, inasmuch as it begins with a single line, "This is what he thought," before it conjures an internal dialogue. Such univocality stands strongly apart the from multi-voiced quality of the trilogy as a whole, but Atwood

complicates even this implicit criticism of Crake by placing it in an ethically complex rhetorical context. Specifically, Toby is offering this origin story to the Crakers on the night before the trilogy's culminating battle with the Painballers, a gesture justifying the violence that will be directed toward the enemy. In other words, Toby adapts the story of Crake's apocalyptic cleansing so as to legitimize the coming violence as the completion of his plan. In the larger register of the trilogy, the violence, including ultimately the execution of the Painballers, is justified by their radical lack of empathy, a lack that makes them less than human, and even less than the human-animal hybrid Pigoons, who side with Toby and her fellow survivors precisely because shared grief, and the resulting empathy, have provided a foundation for coalition.

Although these survivors, including the Crakers, believe themselves compelled to continue carrying out certain aspects of Crake's "great rearrangement," the ending of the trilogy emphasizes something different: a hybridization and polyvocality that looks beyond determinist, utopian, Malthusian presumption. As Atwood has argued in designating the trilogy "speculative" (as opposed to science) fiction, these events *could* happen.[16] By no means does Atwood imply that she believes these events *should* or necessarily *will* happen.[17] In this regard, Atwood invites a critical analysis of the fatalism evident as the God's Gardeners pass Glenn the deadly virus that would form the core of the plague. In a trilogy that places great weight on the evolutionary power of narrative, including the key role it plays precisely as regards adaptation, such fatalism on the part of the group's leaders is anything but an intrinsic human feature. Instead, it is an artifact of genre, and a crutch that Crake leans on to justify the self-amputation of empathy as he releases the plague (an extension of familiar Malthusian beliefs). As a model of creative self-destruction, Crake's nightmare leaves much to be desired. And yet, even as Atwood takes this critical stance, she invites her readers to join her in creating a speculative apocalyptic venture that she hopes will be beneficially transformative. Like those of the God's Gardeners, her apocalyptic imaginings attempt to emphasize an empathy that could ground positive adaptation, now and in the future.

Afterword: Creative Self-Destruction and 9/11

Although more than a decade has passed since the suicide attacks of 9/11, that day's trauma remains an open wound, one that extends both forward in time (the seemingly endless war on terror in Afghanistan and Iraq, the continuing "security state" in the West) and backward (the history of conflicts motivating the bombers).[1] Events such as 9/11 may never provide closure, but the fundamentally unsettling nature of the suicide attacks has not stopped commentators from seeking more thoughtful and compelling analyses of what that day's violence might mean than have appeared thus far.

In recent years, a steady stream of essayists have measured a wide variety of post-9/11 novels and found them consistently lacking, often because their authors are perceived as deferring the social and political implications of the suicide bombings and their aftermath, and instead focusing on personal and ultimately sentimental dynamics.[2] In this vein, Ruth Franklin asks, "Ten years later, do we still helplessly regard 9/11 as an 'unimaginable fact,' a *deus ex machina* of indeterminable cause, rather than the product of a toxic swirl of historical, religious, and political forces? If we do, it could well be because our novelists continue stubbornly to insist on turning their gaze inward, bizarrely searching for the answer to the question of 9/11 in America rather than at its global source" (1). Science fiction has not been spared this critique. For example, Haris Durrani argues in "The Failure of Post-9/11 Science Fiction" that the genre seems to be at a loss for offering insightful social analysis regarding 9/11, in large part because of

> a desire to explain why America was attacked in the simple language of good and evil, to depict the perceived enemy as only a religiously motivated one – to retreat . . . into modern-day tribalism. Indeed, the

> context of American discussion about "the Muslim world" . . . has shifted its focus from the cultures and politics of those nations to, far too often, discussion solely of religious tenets and extremism. This is a dire simplification which does no justice to the political roots of the tragedy of 9/11. I see this shift from politics and culture to religion and extremism particularly in American speculative fiction . . .. Speculative fiction ought not merely inspire; it ought to challenge. By this standard, post-9/11 speculative literature has failed us. It echoes American fears of the Muslim Other, capitalizing on American anxieties . . . [T]oo many of today's speculative fiction writers . . . have absorbed and amplified the popular American fear of the Muslim world . . .. [T]hese writers echo the common denominator – an oversimplified interpretation of the relationship between America and the Muslim world in the absolute language of religious motivation and the extremism of good versus evil. (8–10)

Although the quality of science fiction's response to 9/11 has been uneven in certain respects, and thoroughly anemic in others, it would be problematic to write off these efforts too quickly. In particular, a number of these recent works gain texture and significance if they are read through the framework of the creative self-destruction model explored in the previous chapters. In analyzing the creative responses to 9/11 in the context of creative self-destruction, I do not intend to suggest that the suicide bombers were themselves influenced by the science fiction engaged in this study; I am aware of no evidence to support such a claim. Instead, I argue that coming to terms with the violence of 9/11 casts a new light on the genre's experimentation with creative self-destruction: that, intentionally or not, various recent science fiction artists have participated in a reassessment and reworking of the creative self-destruction model since the bombings.

Before 9/11

To the extent that the preceding chapters tell a larger story, they are linked by the evolution of an idea: that suicidal crises may provide an opportunity to break with problematic habits of thought and feeling, as well as a chance to fashion different, less violent behaviors and relations. As is so often the case with histories of science fiction, H. G. Wells plays a crucial role in launching this narrative. In

particular, *The Island of Doctor Moreau* develops creative self-destruction as a means of tackling the most profound paradigm shift of his era, if not of the modern era in general: the Darwinian revolution. Although Wells' novel concludes with its central character a broken and deeply traumatized survivor, Prendick crafts a story of his experiences after the fact, a story that itself testifies to his capacity to see himself and humanity anew. Specifically, Wells credits the creative self-destruction process with bringing to the fore deep connections between human and animal life, connections that are most explicit when Moreau's experiments challenge Prendick's assumption of human superiority. As the chapter on Wells demonstrates, Prendick's suicidal crises play a crucial role in facilitating an evolution of perception. Prendick knows Darwin's theory before he sails off to explore the Pacific; it is not until he is compelled to confront the animal within humanity (via his proximity to cannibalism and to Moreau's experiments) that he lives, and almost dies, with the deeper implications of Darwin's work, with its challenge to previous notions of human exceptionalism.

My subsequent case studies similarly mark a significant historical and cultural shift inasmuch as they engage texts produced in the era since species suicide has become a widely acknowledged and deeply felt possibility. Carrying the weight of two world wars and the subsequent cold war, the nuclear age compelled analysis of humanity's propensity for self-destruction, and science fiction answered the call, taking up not only nuclear threats, but also extinction fears associated with artificial intelligence, biotechnology, and environmental collapse. In this vein, Stanislaw Lem's *Solaris* suggests that humanity is so immersed in anthropomorphic blindness that suicidal "rebooting" is the only viable means of freeing the imagination so that humanity might embrace contact with other forms of intelligent life. Crucially, the path through creative self-destruction offers a means of pursuing existentially rewarding life driven by wonder rather than by fear. Likewise, William Gibson envisions a kinship between humans and artificial intelligence that requires the suicidal rebooting and liberation of both forms of life before this familial bond might be achieved. In his complex rethinking of the human

desire for transcendence, Gibson proclaims that successful regeneration depends not on escaping either the machine or the flesh, but rather on embracing the two together. Case's suicidal "betrayal" of humanity (freeing the AI) represents a preferred alternative to the apocalyptic failure of kinship imagined by the *Terminator* franchise and so many similar projects. Gibson's contribution to the creative self-destruction genealogy also includes experimentation with hyperlinking narrative, and in this regard, *Neuromancer* marks an important innovation in its attempt to reshape the reader's cognitive patterns and thereby prepare the ground for the human/AI kinship the text imagines. All three of the cases noted thus far – *The Island of Doctor Moreau*, *Solaris*, and *Neuromancer* – identify suicidal crises as a mechanism for negotiating problematic forms of human exceptionalism: for Wells, the volatile boundary lies between human and animal life; for Lem, between human and alien life; and for Gibson, between human and AI existence. Although these texts present central characters traumatized by suicidal crises, each scenario also finds these survivors gaining insight into themselves and humanness from the resulting cognitive "rebooting."

After 9/11

In contrast, the post-9/11 texts examined in this study's later chapters turn a more critical eye toward the model of regeneration previously associated with suicide and suicidal crises. In some instances – *Inception* and *Looper* – the model remains viable (provides a mechanism for gaining insight and meaningful change); in other instances – the *Maddaddam* trilogy – the model appears to be fatally associated with utopian violence, but all of these case studies are noteworthy for their indirect, although simultaneously significant, engagement of 9/11. Subtle references to complex aspects of 9/11 and the war on terror in these texts suggest that the artists are rethinking creative self-destruction, and not simply in order to accept or reject it. Instead, the works testify to the deep and extensive ways that this model of change permeates Western culture. In this regard, 9/11 appears to be acknowledged as a prompt to reassess

notions of regenerative self-destruction, but in a manner that refuses to treat 9/11 as a focal and unique event. The binary political dynamics associated with the bombings – the "us versus them" logic mobilized by perpetrators and victims alike – are modulated in these works, affording a critical distance that allows a more nuanced analysis of the cycles of violence that include but are not solely defined by 9/11. In the process, these artists take creative self-destruction in new directions, implicitly asking: (1) How is the model reshaped as it becomes a part of mass media spectacle? (2) What temporal modes shape the performance and outcomes of creative self-destruction devoted to breaking cycles of violence? and (3) How has the creative self-destruction model installed itself in particular institutions and social projects, including those seeking to prevent destructive behaviors (e.g., the environmental movement)? Although the texts engaged in my last two chapters do not explicitly foreground 9/11, assessments of science fiction's overall response to the bombings and the subsequent war on terror would benefit from considering these artists' efforts because they bend their performance of creative self-destruction in innovative, critically complex ways that ultimately provide sophisticated analyses regarding social and cultural change.

The heavily televised, spectacle-oriented violence of 9/11 prompted self-analysis by many witnesses in the United States who had not previously wrestled with politically motivated suicide attacks; part of the post-9/11 trauma has been described as a certain loss of innocence, and in this regard, the attacks compelled a negotiation of suicidal violence that seemed quite distant to many in the United States.[3] In this vein, *Inception* registers ensuing anxieties about the limits of Western, and especially U.S., perception, as well as concerns regarding the media's role in fostering these limits by promoting a culture of narcissism, or what various pundits described more deferentially as the "American insularity" shattered by the 9/11 attacks (Franklin). Nolan's film presents a crisis of interpretation in which mediascapes may help colonize or liberate audiences from narcissism because the mediascapes play an increasingly profound role in shaping viewers' notions of reality, and in ways that can

heighten or subvert the viewers' reading of the social and political context in which they operate. As Arjun Appadurai has argued, media has become so pervasive and deep in its impact that it has become a fundamentally important political site, shaping what can be imagined before it is articulated (*Modernity at Large*, 5). The crisis of interpretation, then, is precipitated by accepting, and even acting upon, notions of reality despite the acknowledged distortion associated with pervasive media manipulation and bias. Responding to such "agency panic," *Inception* offers a version of suicidal rebooting as a mechanism of media counter-manipulation: a kind of "talking back" that exploits mediascapes rather than attempt to deny or escape them.

Various aspects of *Inception* invite connection to 9/11 and its aftermath. A heist film, *Inception*'s plot is driven by a crime planned by Saito, a relatively honorable corporate tycoon trying to prevent the rise of a crushing monopoly of global energy resources; his goal strongly recalls the global energy politics playing no small part in the occupation of both Iraq and Afghanistan after 9/11. But perhaps most pointedly, the film explicitly locates the agency panic associated with mediascapes in two Muslim settings. In the opening sequence, the inception team seems to be overwhelmed by a riot filmed in Tangiers, an insurrection carrying strong visual echoes of *The Battle of Algiers* (a blueprint for insurgent terrorism in occupied countries across the globe). *Inception*'s initial insurgent riot mirrors the disruption of perception experienced by the viewer as the scene then shifts to yet another (seemingly more real) level of reality on a bullet train in Japan. An underground dream palace (and opium den look-alike) in Mombasa provides the second Muslim setting serving as a focal point of agency panic. Specifically, the proprietor delivers some of the most resonant lines of the film. Asked by the inception team if the many people dreaming in the underground den come every day to sleep, the elderly proprietor answers, "No. They come to be woken up. The dream has become their reality. Who are you to say otherwise, son?" This exchange offers context for the provocatively ambiguous end of the film, and for the "actual" although accidental suicide of the central character's wife, Mal. Although

director Christopher Nolan suggests that the creative self-destruction model remains viable, the mechanism is significantly complicated in this post-9/11 treatment in which characters negotiate mediascapes that may promise agency but that also threaten vulnerability to traumatic, even deadly, manipulations. These nuances have not been lost on the film studio behind the film; Warner Brothers is reportedly exploring plans to build a franchise from *Inception*'s initial success, with the next installment placing the inception technology in the hands of Middle Eastern terrorists intent on striking Western targets.[4]

Looper explores a different kind of post-9/11 concern, inasmuch as the film mobilizes suicidal regeneration as it maps a battle among competing temporal modes of apprehension. Rather than focus on particular aspects of human exceptionalism or media-related crises of interpretation, *Looper* is distinguished by its critique of temporal determinism, which is credited with reinforcing the problematic habits of thought targeted in one way or another by all of the examples in this study. *Looper* is also distinguished by the clearly intentional, completed suicide of its central character; all of the texts discussed previously have focused primarily on survivors of suicidal crises. In a film attempting to imagine a way out of cycles of violence, this death may carry significant irony by enacting what *Looper* appears to speak against. The film attempts to mitigate this irony on two fronts: it casts Sara's murder as the only alternative to Young Joe's suicide, and it posits a doppelganger relationship between Young Joe and Cid, thereby suggesting that in some fashion Young Joe lives on through Cid. In this framework, the completed suicide retains the regenerative import common among the pre-9/11 examples of creative self-destruction. This import is directly tied to escaping a retribution-motivated reign of terror that Cid might visit on the criminal class controlling society in the future.

Young Joe's suicide implicitly frees Cid from the terrorism he would undertake were he to grow up without his mother's influence. In fact, Cid's potential retribution, which would cost Old Joe's wife her life in one possible future, is cast as a response to the institutionalized violence undertaken by the loopers, who murder countless

kneeling and hooded victims: victims whose visual presentation strongly echoes the hooding of Abu Ghraib and Guantanamo inmates. Similarly, and with no small irony, the loopers culminate their careers by executing older versions of themselves. To the extent that *Looper* invites analysis of 9/11 and its aftermath, it suggests that the violence inflicted on those proclaimed the "enemies of the West" rebounds onto its perpetrators, and that the entire process is governed by an embrace of determinism that requires a radical and suicidal intervention to break.

Of all of the texts studied here, Margaret Atwood's *Maddaddam* trilogy evinces the greatest skepticism regarding the prospects of suicidal regeneration. Although the novels and Atwood's own writings about speculative fiction provide ample evidence of her deep distrust of utopianism and other forms of violence marshaled in the name of radical change, it is not clear in the trilogy what constituencies might have sufficient influence to alter humanity's course, which appears clearly untenable, especially in terms of environmental degradation. The cycles of violent confrontation structuring the trilogy's narrative suggest that the post-apocalyptic setting has by no means transcended the weaknesses Crake attempted to bioengineer out of his replacements for humanity. Crake's explicit attempt to reboot humanity includes an elaborate murder-suicide motivated in part by retribution, but also by Malthusian beliefs associated with Paul Erlich. In this manner, Atwood critiques not only the model of creative self-destruction, but also the profound lack of empathy that infected aspects of the modern environmental movement, aspects that might reanimate in times of social upheaval. Atwood has noted that she was just beginning the trilogy when 9/11 happened, that she was compelled to put the writing down for a period because of the overlaps between her fiction and reality. Given the relative "proximity" of Atwood's writing to the suicide bombings, it is striking that the trilogy gives compelling consideration to Crake's motives even as it levels a larger critique targeting utopianism, including its Malthusian variations. Not entirely without hope, the trilogy provides evidence of an adaptive resilience closely associated with the impulse to create and share narratives; Atwood poses this adaptive

resilience as a motor for gradual, collective change, and as a pointed alternative to the creative self-destruction model.

Beyond the Case Studies

Other prominent science fiction responses to 9/11 have been far less inclined to distance themselves from the creative self-destruction model. The focus of considerable critical attention, the television series *Battlestar Galactica* (2004–2009) used the beginning of its third season to invite audience identification with suicide bombers. In the process, the series drew on explicit visual references to occupied Iraq and Afghanistan, and in this manner the series asked its viewers to identify with the motivations of insurgent militants in those countries. As Michael Dudley has noted, the series emerged

> as a deliberate and uncompromising attempt to confront the aftermath of the September 11th attacks and the "war on terror." From its inception as a mini-series in which humanity is all but wiped out in a sneak attack by a seemingly inhuman enemy, to its almost unrelievedly bleak portrait of a civilization trying to retain its fundamental values in the face of an ongoing threat – and often failing spectacularly – *Battlestar Galactica* has acted as nothing less than a kind of immersion therapy for post-9/11 America. (*Battlestar*)

The representations of insurgency in the series clearly fall short of conveying a Muslim cultural and political voice that is woefully underdeveloped in science fiction, but they do invite a degree of political identification with insurgent terrorism that may act as a catalyst for more of the work called for by Durrani, Franklin, and critics with similar concerns.

Another work inviting viewers to identify with insurgent bombers, the film version of *V for Vendetta* (2006) presents strong visual references to the war on terror (particularly Abu Ghraib and Guantanamo detainees) as it rewrites Alan Moore's and David Lloyd's anarchist graphic novel in order to emphasize a political struggle between democracy and fascism. Reviewers of the film were quick to note its pointed critique of the post-9/11 unleashing of the security state in the West, and particularly in the United States.[5] The erosion of civil liberties associated with the U.S.'s Patriot Act is

mirrored in the film by England's slide into fascism, an erosion that relies not on an opportunistic response to suicide bombings, but even more sinisterly on the state's covert killing of its own citizens by means of bioterrorism: bioterrorism deliberately undertaken to cultivate the public's acquiescence to fascist political reforms. The retaliatory violence that is, in turn, put in motion by the central character, V, includes V's suicidal attack on the worst of the government perpetrators of the bioterrorism. Ultimately, the actions pursued by V are credited with achieving creative self-destruction because the ideas for which he fought animate a collective revolt against the government. The film concludes by emphasizing that V and the other government victims survive in the spirit of the revolution. V lives on not through a single doppelganger (Young Joe symbolically surviving through Cid), but rather through the revolutionary public that has come to share his political commitment.

This regenerative dynamic is previewed when V's "protégé," Evey, is forced by V to endure imprisonment, torture, and mock execution by what Evey believes are government agents. V carries Evey through this simulated abuse so that she might see beyond herself, beyond the overwhelming concern for personal safety that itself functions like a mental prison in the security state. As Evey's rough education culminates, she refuses to provide her simulated interrogators with information about V, and makes peace with an understanding that some political commitments may require self-sacrifice. Evey's "lesson" is that she may indeed make such a choice; faced with her apparently imminent execution, she sees beyond fear for her safety. In short, she willingly faces her death despite having information about V that would purchase her freedom. Evey's "education" raises deep moral and ethical issues, but the film suggests that it is ultimately the government, through its manipulation of fear, that is most clearly culpable. Even so, V acknowledges the dangers of retribution, and accordingly cedes to Evey control over the bomb that would symbolically topple the fascist government. Her decision to follow through and destroy Parliament is framed as a means of saving the spirit under which it was founded, and as an indication of her liberation from fear mongering. The film version

sidesteps questions regarding the ways in which despotic violence may be inherent in democracy, that is, the kinds of questions that led Moore and Lloyd to explore anarchism in the original graphic novel; to the degree that the film sacrifices these inquiries, its suicidal rebooting may mask a certain conservatism and even nostalgia regarding Western liberalism, a possibility signaled by the problematic history of liberal vigilantism called up by V's character. Whatever one makes of these possible shortcomings, it seems clear that the filmmakers reworked the graphic novel in order to trace the ways that the post-9/11 war on terror might undermine democracy.

Although *Battlestar Galactica* and *V for Vendetta* both push back against the notion that post-9/11 science fiction has retreated into personal, religious, and mythological projects, Cormac McCarthy's *The Road* might well be taken as a notable example of the impulse to reframe the fallout of 9/11 in precisely the ways that have drawn criticism. With minimalist prose that brings attention to every word as though the language itself might never be used again, McCarthy conveys a desperate intimacy between an unnamed father and his young son who struggle to survive in a devastated landscape where most of the few remaining humans rape, torture, and cannibalize their peers. The novel pointedly offers no explanation for the devastation that is everywhere apparent, and McCarthy has refused to proclaim one in interviews, an avoidance that underscores his singular interest in humanity's precarious existence after the fact. The most hopeful aspect of this post-apocalyptic world rests in the love shared between father and son, a notion reinforced when McCarthy describes the novel as a love letter to his own young son (whom he credits as a co-author). Critical debate continues regarding the significance of this familial relation in a world so thoroughly devastated that the eventual extinction of all life on Earth seems beyond question, but a different set of arguments struggles over the allegorical aspects of the novel: specifically, the invitation *The Road* presents to analyze the time of its writing and reception. Critics have located numerous allusions to 9/11 in the work, and in this vein Lydia Cooper reads *The Road* as a grail narrative, one that locates in the son a salvific compassion that

might cure a kingdom wrestling with the aftermath of the suicide bombings (221). In considering the latent political and social import of the novel, it is crucial to wrestle with the nature of this allegorical cure. As *The Road* unfolds, both father and son experience repeated suicidal crises, with the mother's suicide before the main action of the novel looming over the father and son at every turn. As menacing as the "bad guy" murdering cannibals are, the bottomless despair endured by both father and son poses what may be the greatest threat to their survival. To the extent that the various suicidal crises they experience promote a regeneration, these episodes help shift the pair away from a radically utilitarian existence in which survival seems to count for all, and toward a dignifying compassion that might supersede their personal version of the post-9/11 defensive security state. The father's transformation in this regard accelerates as he nears death and realizes he cannot make good on his promise to his son to take him with him. The son undertakes less of a transformation as he struggles with the father throughout the novel, consistently asking that they accept risks by extending compassion to others. Nonetheless, the son becomes more explicit in his resistance to his father's strict, defensive utilitarianism as he moves through suicidal crises.

At the end of the novel, shortly after the father has died, the son effectively discards his father's rigorously maintained security measures and makes himself vulnerable to the first person he encounters. On one level, this reversal of the father's practices might be read as a leap of faith, one that is rewarded inasmuch as the stranger turns out to be one of the "good guys." However, in the 9/11 context in which so much critical attention has been brought to the "securing" of America (including the civil liberties sacrificed through the Patriot Act), there appears in the son's final actions a significant, if subtle, political comment. The political miracle of the text is the son's ability to imagine something other than the fear and despair that consumed his mother and dictated the relentless and potentially dehumanizing utilitarianism pursued by the father. The final paragraph of the novel – devoted to the beauty and mystery of trout – is an ode precisely to this ability to imagine. The state of wonder this

paragraph conveys stands as the counterpoint to the debilitating fears that led the mother to suicide, that shape most of the father's actions, and that find a parallel in America's post-9/11 security state. *The Road* is certainly a sentimental love letter presented by an author to his son, and a mythologically loaded grail narrative, but it is also a profoundly timely comment on the security-state mentality that took hold of the United States after 9/11, a period that saw an unprecedented militarization of U.S. citizenship itself. In this regard, McCarthy's novel, like the other post-9/11 science fiction explored here, suggests a social and political response to the suicide bombings and their aftermath that deserves recognition and critical attention. The allegorical nature of this political work builds on one of the long-standing strengths of science fiction: its provocative juxtapositions of speculative and real worlds. But, as the study in hand demonstrates, texts such as *The Road* also engage a creative self-destruction theme that has a long and rich history within the genre.

Notes

Introduction

1. See John Keats' poem "Lamia" (1820) as an often cited example of this response to the rise of science, as well as Edgar Alan Poe's poem "To Science" (1829), inspired by Keats' work.
2. In *Wonder, the Rainbow and the Aesthetics of Rare Experiences*, Philip Fisher documents this canonical response as it has been associated with Keats' poem, "Lamia," and he offers an innovative counter-reading that emphasizes an interest in wonder that unites science and the poetic arts (89–99).
3. For arguments situating Wells and his peers as originators of science fiction, see Elana Gomel's *Postmodern Science Fiction and Temporal Imagination* (27–52), and Margaret Atwood's *In Other Worlds* (155).
4. See Durkheim's *Suicide: A Study in Sociology*; this breakthrough study argued that suicide should be investigated as a reaction to social factors, and not simply as a matter of individual despair.
5. See Crosby A.E., Ortega L., Melanson C. *Self-directed Violence Surveillance: Uniform Definitions and Recommended Data Elements, Version 1.0* (11–21).
6. See in particular Gregory Renault's analysis of Suvin's study, which takes exception to Suvin's engagement with Marxism, and highlights the limitations of Suvin's boundary setting between fantasy and science fiction (125–131).
7. Atwood has noted that one of her "rules" for writing *The Handmaid's Tale* was that she "would not put into this book anything that humankind had not already done, somewhere, sometime, or for which it did not already have the tools" (*In Other Worlds*, 88).
8. Csicsery-Ronay, for example, has argued that the genre has grown so pervasive that it functions as a broadly shared mode of apprehension and cognition: "This widespread normalization of what is essentially a style of estrangement and dislocation has stimulated the development of science fictional habits of mind, so that we no longer treat sf as purely a genre-engine producing formulaic effects, but rather as a kind of awareness we might call science fictionality, a mode of response that frames and tests experiences as if they were aspects of a work of science fiction" (2).

9. See Schumpeter's *Capitalism, Socialism, and Democracy* regarding his development of the "creative destruction" concept.
10. For an example of the "creative destruction" approach carried to literary studies, see Philip Fisher's *Still in the New World: American Literature in a Culture of Creative Destruction*. Fisher's work yields evidence of the shortcomings associated with the concept (e.g., an unusually acritical patriotism and a displacement of historical violence with continuing impacts).
11. See Bakhtin's chapter "Discourse in the Novel," in *The Dialogic Imagination* (259–422).
12. Consider, for example, the exploration of this topic in *Kindred*, a novel in which Alice commits suicide, Rufus is saved from repeating Alice's act, and Dana uses suicidal injury to escape the past, at least temporarily. Another of Bulter's most prominent novels, *Dawn*, describes mass suicide in a manner that recalls the history of African American slavery and suicide as a political act of rebellion (see John Lennard, *Reading Octavia E. Butler*, 25).
13. See Helford's essay, "'Would You Really Rather Die than Bear My Young?': The Construction of Gender, Race, and Species in Octavia E. Butler's 'Bloodchild'."
14. See Randall Kenan's interview of Butler (especially 498).
15. See Thibodeau's article "Alien Bodies and a Queer Future: Sexual Revision in Octavia Butler's 'Bloodchild' and James Tiptree, Jr.'s 'With Delicate Mad Hands.'"
16. See Mark Fisher's article "The Lost Unconscious: Delusions and Dreams in *Inception*." (45).
17. My model for this notion is Timothy Melley's agency panic, as articulated in his study, *Empire of Conspiracy* (see especially 7–15).
18. See Fredric Jameson's chapter, "The Cultural Logic of Late Capitalism," in *Postmodernism, or the Cultural Logic of Late Capitalism* (1–54).
19. See Tim Lenoir and Henry Lowood's article, "Theaters of War: The Military Entertainment Complex."
20. See Atwood's discussion of utopianism and dystopianism in *In Other Worlds* (68–73).
21. As examples of Marxist criticism, see Suvin's work noted earlier as well as Fredric Jameson's *Archaeologies of the Future: The Desire Called Utopia and Other Science Fictions* and Carl Freedman's *Critical Theory and Science Fiction*; in the semiological and postmodernist veins, see Samuel R. Delany's *Starboard Wine* and Damien Broderick's *Reading by Starlight: Postmodern Science Fiction*; for examples of feminist and queer studies approaches, see Joanna Russ' *To Write Like a Woman: Essays in*

Feminism and Science Fiction, Veronica Hollinger's "Feminist Science Fiction: Breaking Up the Subject," Jenny Wolmark's *Aliens and Others: Science Fiction, Feminism, and Postmodernism*, Brian Attebery's *Decoding Gender in Science Fiction*, and Wendy Pearson's "Alien Cryptographies: The View from the Queer"; for examples of Afrofuturist criticism, see Dewitt Douglas Kilgore's *Afrofuturism: Science, Race, and Visions of Utopia in Space*, and Daniel Bernadi's *Star Trek and History: Race-ing Toward a White Future*; as noted, Mark Rose's *Alien Encounters* provides a genre-oriented approach; trauma studies approaches include Katherine Snyder's "Time to Go: The Post-Apocalyptic and the Post-Traumatic in Margaret Atwood's *Oryx and Crake*," and Anthony Enns' "Mediality and Mourning in Stanislaw Lem's *Solaris* and *His Master's Voice*"; Kathryn Allan's edited collection *Disability in Science Fiction* and Eric Otto's *Green Speculations* engage disability studies and environmental studies, respectively.

1 Living to Wonder

1. See *H. G. Wells' Literary Criticism*, edited by Patrick Parrinder and Robert M. Philmus, 222–226.
2. Ibid., 240–242.
3. Ibid., 228. As Parrinder and Philmus note, the original title of Wells' 1934 self-assessment captures this sense of incompletion: *Experiment in Autobiography: Discoveries and Conclusions of a Very Ordinary Brain (since 1866)*.
4. See Michael Sherborne's *H. G. Wells: Another Kind of Life*, 44.
5. For a rich example of the dialogue between science fiction and animal studies, see *Animal Alterity: Science Fiction and the Question of the Animal* by Sherryl Vint.
6. See Beer regarding Darwin's audience and the randomness associated with Darwin's theory, 4 and 7 respectively.
7. Wells incorporates this assessment into his *Kipps: The Story of a Simple Soul* (book I, chapter 2, section 3), as noted by Sherborne, 43.
8. See Sherborne's discussion of James' appraisal and Wells' own assessment of the role of his experiences in his writings, 141–142.
9. Beer describes this popular response to Darwin, 193; see also George Levine's study, *Darwin and the Novelists*, for his argument regarding the ways Victorian literature adapted to the lack of teleological assumptions, 18–19.
10. For an overview of the response to Darwin's theory and Wells' responses to appropriations of his work, see Levine, *Darwin and the Novelists*, 2–13; for a summary of Wells' shifting approach to Darwinism, see *H. G. Wells:*

Early Writings in Science and Science Fiction, edited by Robert Philmus and David Hughes, 179–186.

11. In this regard, Levine's approach to paradox resonates with the analysis of political theorist William Connolly in *Identity/Difference*. Taken together, these rethinkings of paradox invite comparison to Keats' notion of negative capability, and suggest that literature may be well positioned to engage complex questions regarding values, especially during periods of significant paradigm shifts.
12. See Levine's *Darwin and the Novelists*, 1–23.
13. See Margaret Atwood's introduction to the novel, xxiii.
14. See Sherryl Vint's essay "Animals and Animality from the Island of Moreau to the Uplift Universe," Elana Gomel's essay "From Dr. Moreau to Dr. Mengele: The Biological Sublime," and John Huntington's study *The Logic of Fantasy*, 63–70.
15. See Ray Lankester's *Degeneration: A Chapter in Darwinism*, published in 1880.
16. See, e.g., Jules Verne's *In Search of the Castaways* and the painting *The Shipwreck of Don Juan* (1840) by Ferdinand Victor Eugene Delacroix.
17. See Gomel's essay "From Dr. Moreau to Dr. Mengele."
18. See Stephen Jay Gould's *The Mismeasure of Man*.
19. See David Lodge's study *The Novelist at the Crossroads*, 218–220.
20. See Vint's essay "Animals and Animality," 96.
21. Consider, for example, Toni Morrison's *Beloved*, and the character Ella, who explicitly describes reading for holes/gaps in narration.

2 Stranded Contacts

1. See *Benet's Reader's Encyclopedia, 5th Edition*, edited by Bruce F. Murphy, 617.
2. Sample works include Mark Rose's treatment of genre in "Filling the Void: Verne, Wells, and Lem," Carl Tighe's exploration of political dimensions in "Stanislaw Lem: Socio-Political Sci Fi," approaches highlighting semantic concerns by Thomas Weissert in "Stanislaw Lem and the Topology of Mind" and Manfred Geier in "Stanislaw Lem's Fantastic Ocean: Toward a Semantic Interpretation of *Solaris*," feminist psychoanalytic analysis by Elyce Rae Helford in "'We Are Only Seeking Man': Gender, Psychoanalysis, and Stanislaw Lem's *Solaris*," engagement of moral theology by Kenneth Krabbenhoft in"Lem as Moral Theologian," and N. Katherine Hayles' analysis of Lem's postmodernist figuration of writing in "Space for Writing: Stanislaw Lem and the Dialectic 'That Guides My Pen.'" Anthony Enns offers a quite helpful assessment of the scholarship treating *Solaris* in his essay, "Mediality and Mourning in Stanislaw Lem's *Solaris* and *His Master's Voice*." As he notes, early

criticism of the novel frequently focused on the cognitive limitations, and especially the anthropomorphism, that Lem associates with space exploration, scientific inquiry, and science fiction; these critical approaches frame the conclusion of the novel as a call to think and feel in new ways, and with an openness that might break previous habits of thought (Enns, 34). To the extent that the end of the text invites readers to reassess what has come before, it suggests that the exchanges with the ocean, and particularly the human reactions to these exchanges, deserve creative and analytical engagement, even if the ocean's motives remain indeterminant (an indeterminancy that Lem pursued with some care). Contact as a controlled and transparent exchange of information with an alien life is not an option in this, or for that matter any of Lem's science fiction. Instead, his interest lies with a different and perhaps more likely challenge: some future interaction with alien life will push human imagination to it limits, and beyond. More recent criticism devoted to the novel mines the interplay of indeterminancy and modeling in the work (e.g., N. Katherine Hayles' essay "Space for Writing"). In this context, imitative behavior by the ocean (the creation of the visitors) represents a step toward "mediation." In this light, the novel constitutes an inquiry regarding the challenges and limitations inherent in communication (Enns, 35).

3. See Freud's "Mourning and Melancholia," 14.
4. For example, see Georges Minois's *History of Suicide*, 1–3, 323.
5. References to, and citations from, *Solaris* in this chapter refer to the 1970 print version of the novel. A 2011 translation of the novel by Bill Johnston has won praise for its fidelity to the original publication in Polish, but this version is in limited circulation as an e-book only. Although the study in hand does not develop a comparison of the versions, readers are encouraged to explore the new translation.
6. See Berenbaum's *The World Must Know: The History of the Holocaust as Told in the United States Holocaust Memorial Museum*, 103.
7. Lem raises this same proposition in *Microworlds* (3), but cannot identify a conscious connection between his bureaucratic art and the looming threat. He struggles with a similar question in *Highcastle* (To what extent are his memories of impending disaster shaded retroactively by his experiences of the traumas that materialized?), a proposition he cannot ultimately answer (95).
8. See Dominick LaCapra's *Representing the Holocaust: History, Theory and Trauma* (10–11) for further discussion regarding the import of recognizing bystanders, collaborators, witnesses, and other agents beyond victims and perpetrators.
9. Hannah Arendt presents this thesis in *The Origins of Totalitarianism*.

10. In this manner, Lem establishes a tension between sublime and wonderous responses to extreme situations that echoes Philip Fisher's treatment of the same in *Wonder, the Rainbow, and the Aesthetics of Rare Experiences*.
11. See Lem's response to the 2002 film version of *Solaris* published online at http://english.lem.pl/index.php/arround-lem/adaptations/soderbergh/147-the-solaris-stationThe.
12. See Abraham and Torok's theory of encryption in *The Shell and the Kernel: Renewals of Psychoanalysis, Volume 1*, 16–18.
13. See Antonio Damasio's *Descartes' Error* for an elaboration of this critique.
14. See, e.g., Peter Hogarth's suicidal musings at the conclusion of Lem's novel *His Master's Voice*, 199.

3 Stealing Kinship

1. Prominent contributions to this discussion include Ronald Bailey's *Liberation Biology*, Allen Buchanan's *Beyond Humanity?*, Francis Fukuyama's *Our Posthuman Future*, N. Katherine Hayles' *How We Became Posthuman*, James Hughes' *Citizen Cyborg*, Bill Joy's "Why the Future Doesn't Need Us," and Ray Kurzweil's *The Singularity Is Near*.
2. See Garreau's analytical summary of prominent predictions regarding technological innovation and its human impact in *Radical Evolution*.
3. Regarding the impacts of emergent technology on intelligence, see Kurzweil (310–311), Garreau (47–83), and Hawkins (213–218); for an analysis of potential inequities created by uneven accessibility and engagement of emergent technology, see Fukuyama.
4. See Kurzweil's summary of reactions to his singularity thesis, 427–483.
5. Hawkins provides an overview of early AI development and its temporary decline, 9–22.
6. Recent examples of this work are collected in *Bio-Inspired Artificial Intelligence*, edited by Dario Floreano and Claudio Mattiussi. Hawkins' *On Intelligence* also offers a strong example that has been positively and widely reviewed in both academic and popular venues.
7. See also Edward Tenner's fascinating study, *Our Own Devices*, regarding the ways that ubiquitous forms of technology engage in feedback relationships with humans, such that both are altered, oftentimes in dramatic and unanticipated fashion.
8. For a summary of Freire's banking concept of education, see *Pedagogy of the Oppressed*, 71–86.
9. In another essay, I have traced the origins of hyperlinking to Ephraim Chambers, *Cyclopedia*, the first example of the modern encyclopedia, and the inspiration for the subsequent French iteration by Diderot and D'Almbert. Chambers understood that the encyclopedic system for

categorizing knowledge carried with it a certain intellectual violence (*Preface*), and he built into the text a complicated network of linkages among the entries in order to counteract this limitation. I have also drawn from George Landow's *Hypertext* while formulating my argument regarding the cognitive implications of Gibson's experiments with narrative form.

10. Although there is some debate about the degree to which these types of memory are neatly separable (see John Von Neumann's *The Computer and the Brain*), Hubert Dreyfus, in *What Computers Can't Do*, offers a compelling and comprehensive case for recognizing the human versus machine distinction. Hayles recounts and extends this argument in *How We Became Posthuman* (201–202). Hawkins's argument is also premised on the notion that, at least to date, technology has not begun to capture the essential qualities of human intelligence, which are fundamentally linked to the unique functioning of human memory (2). Hayles further complicates these discussions in *My Mother Was a Computer* by exploring the ways in which the digital and the analog are fundamentally dependent on one another. Exploring the digital's dependency on the analog, she notes the degree to which variable voltage must be manipulated to create distinguishable signals: noise reduction in the service of generating computational ones and zeros (208). At the same time, Hayles raises the prospect of a "computational universe": "the claim that the universe is generated through computational processes running on a vast computational mechanism underlying all of physical reality" (3). These notions ultimately suggest that digital and analog phenomena are fundamentally linked, even if one type of phenomena might appear to be dominant in certain circumstances. Such complex processes, in which digital, analog, virtual, and physical modes interact in cooperative, contestatory and co-evolutionary ways, form the core of what Hayles describes as "intermediation" (*Mother*, 217), a term that might serve as the basis for a rigorous concept of machine/human kinship.
11. See Hollinger's essay, "Cybernetic Deconstructions: Cyberpunk and Postmodernism," 203–218.
12. For an excellent analysis of the problems with the Cartesian model, see Antonio Damasio's *Descartes' Error: Emotion, Reason, and the Human Brain*. Feminist scholarship has also been particularly forceful in prompting a rethinking of embodiment, including in such landmark texts as Elizabeth Groz's *Volatile Bodies* and Judith Butler's *Bodies that Matter*. Hayles has participated in this dialogue as well, taking as her focus (1) the ways in which embodiment is figured in humanistic discourse and information studies ("The Materiality of Informatics"), and (2) the role that embodiment plays in narratives of artificial life (*How We Became Posthuman*, 244–246).

13. In "When It All Changed," Samuel Smith argues that Gibson's use of the name invites readers to approach the novel as a Gnostic text because Orval S. Wintermute translated a portion of the Nag Hammadi library that is clearly Gnostic in orientation. As Smith notes, Gibson has denied constructing *Neuromancer* as a Gnostic allegory. Although it was found with Gnostic texts, the *Gospel According to Thomas* does not comfortably fall within the Gnostic family of early Christian sects.
14. For an example, see Glenn Grant's article, "Transcendence Through Detournement in William Gibson's *Neuromancer*," which argues that the novel rethinks both godhead and transcendence through the context of surrealist practice.
15. In "Cyberpunk and Neuromanticism," Istvan Csicsery-Ronay distinguishes between two phases of science fiction: an "expansive" period (extending until the 1960s) when the genre demonstrated "that human consciousness can contain the future," and an "implosive" period defined by "a drastic, careening plunge toward some inconceivable center of gravity that breaks up the categories of rationality by jamming them together" (271). Cyberpunk participates in the latter dynamic by extending a "crisis of interpretation." By emphasizing the value placed by Gibson on expansive knowledge, I am suggesting that the expansive and implosive qualities of science fiction identified by Csicsery-Ronay interact in complex ways that do in fact provide critical traction and meaningful tensions.
16. Robyn Wiegman articulates a similar practice of critical betrayal at the conclusion of *American Anatomies*. In part, her goal is to shake off the cognitive limits developed as certain critical practices become normative in fields such as feminist and ethnic studies. In this context, such normative practices carry the potential of blocking alternative modes of thought that may threaten or disrupt the institutions housing the disciplines. Providing a rigorous defense of betrayal as critical tool, Wiegman shares with Gibson a fundamental skepticism regarding the impacts of institutions.
17. This juxtaposition of sublime fear and wonder recalls Philip Fisher's compelling study of strongly divergent responses to scientific and technological change, *Wonder, the Rainbow, and the Aesthetics of Rare Experiences*. Although Fisher focuses on reactions to innovations in the early modern context, his analysis offers an inviting way to approach the conflicting approaches to AI and its impacts in the twenty-first century.
18. In his provocative and much-cited contribution to the debates regarding cyberpunk ("Is Cyberpunk a Good Thing or a Bad Thing?"), Samuel R. Delany argues that *Neuromancer* is "extremely cold, highly mannered,

and difficult to read – because it makes almost no concession to the sentiments" (30). In an interview, Larry McCafferty and William Gibson articulate a very different sense of the book's sentimental investments, with Gibson citing the most extensive exchange between Case and Linda Lee (the beach scene, pages 225–236) as the "emotional crux of the book" (McCafferty, 280). McCafferty's point here is to challenge the too-simple divide between humanist sentiment and cyberpunk disaffection that dominated aspects of the cyberpunk debates. As Gibson goes on to explain, one of his goals with *Neuromancer* was to examine how the "hard and glossy" aspects of the cyberpunk world distort and damage humanness (280–281).

19. Hayles' approach here marks an important intervention regarding critical anxieties that have been directed toward cyberpunk's experimentation with virtual worlds and simulation – an aspect of cyberpunk that Gibson has singled out as being particularly liberating and productive (McCafferty, 280). Emblematic of these concerns is Csicsery-Ronay's argument that cyberpunk is "constructed around the literal/physical exteriorization of images representing the breakdown of stable, standard-giving rational perceptual and conceptual categories" (273). Simulation, then, represents hallucination as a form of madness. Hayles instead argues that scenes of simulation (e.g., *Neuromancer*'s beach episode) may stage a powerful intermediation bringing together humanist qualities of narrative and machine aspects of reproduction.
20. Although many critics have noted the sense of "narrative rush" that attends cyberpunk's thrill-seeking characters, it is fascinating that the play with details described here (a version of hyperlinking) actually compels readers to slow down and reflect so that they might fully ascertain the patterns and connections strategically woven into the texts. Works such as *Neuromancer* reward careful, deliberate reading, and challenge claims that cyberpunk offers "no place from which to reflect" because "the speed of thrill substitutes for affection, reflection, and care . . . " (Csicsery-Ronay, 274, 276).
21. In an interview, Gibson emphasizes this point, noting "I'm interested in the hows and whys of memory, the ways that it defines who and what we are . . . " (McCafferty, 270).
22. Darko Suvin ends his essay on cyberpunk and *Neuromancer* by raising a provocative question: Gibson has accomplished something significant by giving expression to a "structure of feeling," but to whom does this structure speak? Suvin suggests that only time will tell, but that there is a prospect that the novel speaks foremost to an elite and youthful audience of artists and technicians enamored of new media (363). Suvin concludes

that Gibson and his fellow travelers may promote a passing "adolescent" attitude. In answer to Suvin's initial question, this essay has argued that the "structure of feeling" developed by Gibson serves as the basis for a rethinking of kinship, particularly between human and machine intelligences. To the extent that this structure of feeling explores an adolescent attitude, it is committed to exploring the *process* of developing this kinship, and as Julia Kristeva has suggested, such adolescent musings are especially loaded (politically, socially, aesthetically) and played a key role in the development of the novel as a form.

23. See Jamesr's summary of the interview with Gibson ("The Launch of *Spook Country* by William Gibson").

4 Escaping One's Self

1. See Kubrick's comments regarding this scene in an interview by Philip Strick and Penelope Houston ("Interview with Stanley Kubrick," 134).
2. See Kathyrn Dean's *Capitalism and Citizenship: The Impossible Partnership* (36–38) for an analysis of narcissism and capitalism; for an example of narcissism attributed to filmic spectatorship, see Laura Mulvey's essay "Visual Pleasure and Narrative Cinema." Also see Anneke Smelik's reassessment of Mulvey's feminist psychoanalytic approach in her essay "Lara Croft, *Kill Bill*, and The Battle for Theory in Feminist Film Studies," 184–186.
3. The changes are outlined in a United States GAO report commissioned by the U.S. Congress as it considers policy changes intended to better protect consumer privacy given the ability of new technologies to collect unprecedented personal information. See *Information Resellers: Consumer Privacy Framework Needs to Reflect Changes in Technology and the Marketplace* (September 2013).
4. Mark Fisher examines Nolan's use of these visual cues in his essay "The Lost Unconscious: Delusions and Dreams in *Inception*," 40.
5. This notion of postmodernist panic is indebted to the "agency panic" defined by Timothy Melley in his study, *Empires of Conspiracy: The Culture of Paranoia in Postwar America*, 7–15.
6. See Fredric Jameson's *The Political Unconscious: Narrative as a Socially Symbolic Act* and Arjun Appaduari's *Modernity at Larger: Cultural Dimensions of Globalization*.
7. See Brian McHale's *Postmodernist Fiction*, 3–11.
8. See Robert Capps' interview, "Christopher Nolan on Dreams, Architecture and Ambiguity."
9. Nolan discusses the ways he invites this ambiguity in his interview with Robert Capps. In this vein, he notes parallels in the representations of

architecture found in both dream and real world settings (e.g., his depictions of Mombasa and limbo). The "dream supervisor" that Cobb visits in Mombasa reinforces this ambiguity by questioning Cobb's attempt to reassert a reality/dream distinction.

10. See Jonathan Nolan's interview with the director in the preface to *Inception, the Shooting Script*, 11.
11. Regarding the transformational elements of death dreams, see Freud's *Interpretation of Dreams*, 147–166; in the same work, he offers an analysis of somatic contributions to dreams (135).
12. See Alison Landsberg's essay "Prosthetic Memory: *Total Recall* and *Blade Runner*," in *Liquid Metal*.
13. See Freud's *Interpretation of Dreams* (70–86) and Landsberg's "Prosthetic Memory" (239–240).
14. The advertising for the film is available for review at a wiki-site devoted to the film, including its production and reception; see http://inception.wikia.com/wiki/Inception_Wiki. For the director's comments regarding *Inception* as a film about filmmaking, see Robert Capps' interview for *Wired*.
15. See Capps' interview.
16. See Fredric Jameson's *Postmodernism, or the Cultural Logic of Late Capitalism*.
17. See Landsberg, 241–242; regarding the Payne studies, see Herbert Blumer's *Movies and Conduct*.
18. See Laura Mulvey's seminal essay "Visual Pleasure and Narrative Cinema," as well as Anneke Smelik's analysis of Mulvey's theory in "Lara Croft, *Kill Bill*, and the Battle for Theory in Feminist Film Studies."
19. See Barbara Creed's essay "Alien and the Monstrous-*Feminine*."
20. Landsberg elaborates this distinction (242), while drawing on Steven Shaviro's *The Cinematic Body*.
21. For a summary of reviews by film critics and audiences, see the Rotten Tomatoes entry, which registers 93 percent and 83 percent approval ratings from the critics and audiences respectively: http://www.rottentomatoes.com/m/looper/.
22. See Constance Penley's reading of *The Terminator* in her essay "Time Travel, Primal Scene, and the Critical Dystopia," in *Liquid Metal*.
23. See the deleted scenes on the blue-ray version of the film.
24. See the Rian Johnson's interview by IFC Entertainment: http://www.ifc.com/fix/2013/01/rian-johnson-interview-looper-bruce-willis-breaking-bad.
25. See David Harvey's *A Brief History of Neoliberalism*.
26. See P. W. Singer's *Corporate Warriors: The Rise of the Privatized Military Industry*.

27. See Chris Hedges and Laila Al-Arian's study *Collateral Damage: America's War Against Iraqi Civilians*.
28. Video games that provide weaponry reference points include American McGee's *Alice* (2000), *Red Dead Redemption* (2010), and *Bioshock Infinite* (2013, with pre-release displays winning numerous awards as early as 2011); each foregrounds the use of a blunderbuss (the signature weapon in *Looper*), and the latter two are also noteworthy for their use of "western" apparel inviting comparison to the "cowboy duster" (long coats) worn by the Gat Men in the film.
29. See Tim Lenoir and Henry Lowood's essay "Theaters of War: The Military-Entertainment Complex."
30. See Brown and Krzywinska's"Movie-games and Game-movies: Towards and Aesthetics of Transmediality."

5 Environmental Adaptation

1. During an interview with Tom Ashbrook, Atwood suggested that the trilogy is less a cautionary tale than a prompt to consider adaptation to changes already well underway. See http://onpoint.wbur.org/2013/09/20/margaret-atwood-will-make-you-afraid-of-her-tomorrow.
2. See Atwood's extended discussion of utopianism in her collection of criticism, *In Other Worlds*, 66–96.
3. Atwood argues for incremental change over utopian projects in an interview with Jared Bland published in *The Globe and Mail*. She also addresses the fundamental tension between unrestrained corporate power and democracy in a *CTV News* interview conducted by Sheryl Ubelacker.
4. The prospect of suicide looms over *The Handmaid's Tale*, with Offred inhabiting the room in which her predecessor took her own life. Further, the novel could be said to climax as she wrestles with the question of whether to kill herself rather than be taken off by Gilead's secret service. Offred's ability to trust Nick marks a crucial existential turn, one in which she is able to see past the deeply debilitating effects of the brainwashing and traumas she has suffered. The novel's afterword not only confirms that her trust was appropriately placed, but also that she found the strength to create a record of what she had lived through. In sum, her decision to leave with Nick's accomplices, and her production of the narrative, indicate that the crisis was part of a creative turn.
5. In an interview with Isabel Slone, Atwood noted that she did not originally intend to extend *Oryx and Crake*'s storyline beyond that novel. The central role of the murder-suicide at the conclusion of the first novel of the trilogy may therefore be read as a key overarching event for the trilogy.

6. Atwood reinforced this interpretation during an NPR interview when she was asked if she had any consoling thoughts to offer given the trilogy's apocalyptic focus. In response, she noted that humans have a history of surviving "bottlenecks." See Atwood's interview with Tom Ashbrook.
7. See Thomas Robertson's study, *The Malthusian Moment: Global Population Growth and the Birth of American Environmentalism*.
8. Although the preponderance of evidence in the trilogy points to Crake's failure (e.g., the Crakers quickly develop many of the attributes he worked desperately to avoid), and although Atwood condemns the utopian presumption with which Crake unleashed the pandemic, there is the possibility that Crake anticipated more than he explicitly states regarding the Crakers' accommodations to the post-apocalyptic environment, etc. In sum, gauging the success or failure of Crake's project is complicated by the reader's fairly limited access to his thoughts.
9. The 2013 World Meteorological Organization's annual Greenhouse Gas Bulletin notes that changes to Earth's atmosphere have already had substantial impacts that are likely to last for hundreds of thousands of years: http://www.wmo.int/pages/mediacentre/press_releases/pr_980_en.html.
10. For a reading of the complex ways that temporality is marked by trauma, see Katherine Snyder's essay, "Time to Go: The Post-Apocalyptic and the Post-Traumatic in Margaret Atwood's *Oryx and Crake*."
11. See David Harvey's *A Brief History of Neoliberalism*.
12. See Atwood's interview with Paul Gallagher in *The List*.
13. For a description of transformative environmentalism, see Eric Otto's study *Green Speculations: Science Fiction and Transformative Environmentalism*.
14. See Lisa Heinzerling's article "Pragmatists and Environmentalists," 1446; cited by Otto (1).
15. See Atwood's comments regarding learning and wonder in *In Other Worlds* (43), as well as her remarks regarding the evolutionary advantages conferred by narration during her interview with Janet Christie in *The Scotsman*.
16. For an extended discussion of Atwood's differentiation between science fiction and speculative fiction, see *In Other Worlds*, 15–37.
17. It has not been uncommon for interviewers to collapse Crake and Atwood; as one might imagine, she has steadfastly resisted this tendency. See, e.g., her interview with Tom Ashbrook.

Afterword: Creative Self-Destruction and 9/11

1. As regards the political dimensions of the 9/11 attacks, Robert A. Pape notes in his article, "Suicide Terrorism and Democracy: What We've

Learned Since 9/11," that "the specific goal sought in almost all suicide terrorist campaigns in modern history is the same: to compel a democratic state to withdraw combat forces from territory prized by the terrorists . . .. Understanding that suicide terrorism is mainly a response to foreign occupation rather than a product of Islamic fundamentalism has important implications for how the U.S. government should conduct the war on terrorism" (1).

2. See Aditya Chakrabortty's essay "Why Are English and American Novels So Gutless?" in which recent literature is taken to task for failing to provide extended analyses of social and political dynamics while maintaining compelling narratives.
3. Roger Simon describes this traumatic shift in his article "Innocence Lost Forever on 9/11."
4. See the article by MovieMaster, "Rumor: Will Inception 2 Be Christopher Nolan's Next Movie?"
5. For example, see Damon Dimmick's "Gunpowder, Treason, and Plot."

Works Cited

Abraham, Nicolas and Maria Torok. *The Shell and the Kernel: Renewals of Psychoanalysis, Volume 1*. Chicago: University of Chicago Press, 1994.

Allan, Kathryn, ed. *Disability in Science Fiction: Representations of Technology as Cure*. New York: Palgrave Macmillan, 2013.

Appadurai, Arjun. *Modernity at Large: Cultural Dimensions of Globalization*. Minneapolis: University of Minnesota Press, 1996.

Arendt, Hannah. *The Origins of Totalitarianism*. New York: Harvest, 1966.

Ashbrook, Tom. Interview with Margaret Atwood. National Public Radio. Web. September 20, 2013. http://onpoint.wbur.org/2013/09/20/margaret-atwood-will-make-you-afraid-of-her-tomorrow

Attebery, Brian. *Decoding Gender in Science Fiction*. London: Routledge, 2002.

Atwood, Margaret. *After the Flood*. New York: Random House, 2009.

———. *The Handmaid's Tale*. New York: Random House, 1986.

———. *In Other Worlds: SF and the Human Imagination*. New York: Random House, 2011.

———. *Maddaddam*. New York: Random House, 2013.

———. *Oryx and Crake*. New York: Random House, 2003.

Bakhtin, M. M. *The Dialogic Imagination: Four Essays*. Trans. Michael Holquist. Austin: University of Texas Press, 1982.

Bailey, Ronald. *Liberation Biology, The Scientific and Moral Case for the Biotech Revolution*. New York: Prometheus, 2005.

Beer, Gillian. *Darwin's Plots: Evolutionary Narrative in Darwin, George Eliot and Nineteenth-Century Fiction*. Cambridge: Cambridge University Press, 2000.

Berenbaum, Michael. *The World Must Know: The History of the Holocaust as Told in the United States Holocaust Memorial Museum*. Baltimore: Johns Hopkins University Press, 2005.

Bernardi, Daniel. *Star Trek and History: Race-ing Toward a White Future*. New Brunswick, NJ: Rutgers University Press, 1998.

Bland, Jared. Interview with Margaret Atwood. *The Globe and Mail*. Web. August 24, 2013. http://www.theglobeandmail.com/arts/books-and-media/is-apocalyptic-atwood-a-bona-fide-prophet-dont-even-go-there/article13934419/?page=all

Blumer, Herbert. *Movies and Conduct*. Charleston, SC: Nabu, 2010.

Bradbury, Ray. *Fahrenheit 451*. New York: Ballantine, 1953.

Bress, Eric and J. Mackye Gruber, dirs. *The Butterfly Effect*. BenderSpink, 2005.

Broderick, Damien. *Reading by Starlight: Postmodern Science Fiction*. New York: Routledge, 1995.

Brown, Douglas and Tanya Krzywinska. "Movie-games and Game-movies: Towards an Aesthetics of Transmediality." In *Film Theory and Contemporary Hollywood Movies*. Ed. Warren Buckland. New York: Routledge, 2009: 86–102.

Buchanan, Allen. *Beyond Humanity? The Ethics of Biomedical Enhancement*. Oxford: Oxford University Press, 2011.

Bukatman, Scott. *Terminal Identity: The Virtual Subject in Postmodern Science Fiction*. Durham, NC: Duke University Press, 1993.

Butler, Judith. *Bodies that Matter: On the Discursive Limits of Sex*. New York: Routledge, 1993.

———. *Precarious Life: The Powers of Mourning and Violence*. New York: Verso, 2004.

Butler, Octavia. *Bloodchild and Other Stories*. New York: Seven Stories, 2005.

———. *Dawn*. London: Aspect, 1997.

———. *Kindred*. Boston: Beacon Press, 2004.

Cameron, James, dir. *Terminator*. Hemdale, 1984.

Campbell, Colin. "Gaming's New Frontier: Cancer, Depression, Suicide." *Polygon*. Web. May 9, 2013. http://www.polygon.com/2013/5/9/4313246/gamings-new-frontier-cancer-depression-suicide

Capps, Robert. "Q&A: Christopher Nolan on Dreams, Architecture and Ambiguity." *Wired*. Web. November 29, 2010. http://www.wired.com/magazine/2010/11/pl_inception_nolan/

Carson, Rachel. *Silent Spring*. New York: Houghton Mifflin, 2002.

Carson, Ted, Josh Bass and Daren Bader, dirs. *Red Dead Redemption*. Rockstar Games, 2010.

Chakrabortty, Aditya. "Why Are English and American Novels Today So Gutless?" *The Guardian*. Web. April 9, 2012. http://www.theguardian.com/commentisfree/2012/apr/09/english-american-novels-gutless

Chambers, Ephraim. *Cyclopaedia, or an Universal Dictionary of Arts and Sciences*. London: n.p., 1728.

Christie, Janet. Interview with Margaret Atwood. *The Scotsman*. Web. August 31, 2013. http://www.scotsman.com/lifestyle/books/interview-margaret-atwood-on-her-novel-maddaddam-1-3069846

Clements, Ryan. "You Died: The Rights and Wrongs in Video Game Death." *International Gaming Network*. Web. July 27, 2012. http://www.ign.com/articles/2012/07/27/you-died-the-rights-and-wrongs-in-video-game-death

Connolly, William. *Identity and Difference: Democratic Negotiations of Political Paradox*. Minneapolis: University of Minnesota Press, 2002.

Cooper, Lydia. "Cormac McCarthy's *The Road* as Apocalyptic Grail Narrative." *Studies in the Novel* v. 43, no. 2 (Summer 2011): 218–236.

Creed, Barbara. "Alien and the Monstrous Feminine." In *Alien Zone: Cultural Theory and Contemporary Science Fiction Cinema*. Ed. Annette Kuhn. New York: Verso, 1990: 128–144.

———. "Gynesis, Postmodernism and the Science Fiction Horror Film." In *Alien Zone: Cultural Theory and Contemporary Science Fiction Cinema*. Ed. Annette Kuhn. New York: Verso, 1990: 214–218.

Crosby, A. E., L. Ortega and C. Melanson. *Self-directed Violence Surveillance: Uniform Definitions and Recommended Data Elements, Version 1.0*. Atlanta, GA: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control, 2011.

Csicsery-Ronay, Istvan, Jr. "Cyberpunk and Neuromanticism." *Mississippi Review* v. 16, no. 2/3 (1988): 266–278.

———. *Seven Beauties of Science Fiction*. Middletown, CT: Wesleyan University Press, 2008.

Cuaron, Alfonso, dir. *Children of Men*. Universal Pictures, 2006.

Damasio, Antonio. *Descartes' Error: Emotion, Reason, and the Human Brain*. New York, Penguin, 2005.

Darwin, Charles. *The Origin of Species*. New York: Signet, 2003.

Dean, Kathyrn. *Capitalism and Citizenship: The Impossible Partnership*. New York: Routledge, 2003.

Delany, Samuel R. "Is Cyberpunk a Good Thing or a Bad Thing?" *Mississippi Review* v. 16, no. 2/3 (1988): 28–35.

———. *Starboard Wine*. New York: Dragon, 1984.

Dimmick, Damon. "Gunpowder, Treason, and Plot." *Reason*. Web. March 17, 2005. http://reason.com/archives/2005/03/17/gunpowder-treason-and-plot

Dreyfus, Hubert. *What Computers Can't Do: The Limits of Artificial Intelligence*. New York: Harper and Row, 1979.

Dudley, Michael. "*Battlestar Galactica*: Immersion Therapy for Post 9/11 World." *Alternet*, Web. March 25, 2009. http://www.alternet.org/story/133419/battlestar_galactica%3A_immersion_therapy_for_post_9_11_world

Durkheim. Émile. *Suicide: A Study in Sociology*. Trans. John Spaulding and George Simpson. Glencoe, IL: The Free Press, 1951.

Durrani, Haris. "The Failure of Post-9/11 Science Fiction." *The New York Review of Science Fiction* 289, v. 25, no. 1 (September 2012): 8–12.

Ehrlich, Paul. *The Population Bomb*. New York: Ballantine Books, 1968.

Enns, Anthony. "Mediality and Mourning in Stanislaw Lem's *Solaris* and *His Master's Voice*." *Science Fiction Studies* v. 29, no. 1 (March 2002): 34–52.

Fisher, Mark. "The Lost Unconscious: Delusions and Dreams in *Inception*." *Film Quarterly* v. 64, no. 3 (2011): 37–45.

Fisher, Philip. *Still in the New World: American Literature in a Culture of Creative Destruction*. Cambridge, MA: Harvard University Press, 1999.

———. *Wonder, the Rainbow, and the Aesthetics of Rare Experiences*. Cambridge, MA: Harvard University Press, 2003.

Fleischer, Richard, dir. *Soylent Green*. Metro-Goldwyn-Mayer, 1973.

Floreano, Dario and Claudio Mattiussi, eds. *Bio-Inspired Artificial Intelligence: Theories, Methods and Technologies*. Cambridge, MA: Massachusetts Institute of Technology Press, 2008.

Franklin, Ruth. "The Stubborn, Inward Gaze of the Post-9/11 Novel," *New Republic*. Web. August 24, 2011. http://www.newrepublic.com/article/books/magazine/94180/september-11-the-novel-turns-inward

Freedman, Carl. *Critical Theory and Science Fiction*. Middletown, CT: Wesleyan University Press, 2000.

Freire, Paulo. *Pedagogy of the Oppressed*. New York: Continuum, 1970.

Freud, Sigmund. *The Interpretation of Dreams*. New York: Random House, 1950.

———. "Mourning and Melancholia." In The Standard Edition of the Complete Psychological Works of Sigmund Freud, Volume *VI (1914–1916)*. London: Hogarth, 1917: 243–258.

Fukuyama, Francis. *Our Posthuman Future: Consequences of the Biotechnology Revolution*. New York: Picador, 2003.

Galison, Peter. "Judgment Against Objectivity." In *Picturing Science, Producing Art*. Eds. Caroline Jones and Peter Galison. New York: Routledge, 1998: 327–359.

Gallagher, Paul. Interview with Margaret Atwood. *The List*. Web. September 11, 2013. http://www.list.co.uk/article/54764-interview-margaret-atwood-on-new-novel-maddaddam/

Gallagher, Rob. "Playing with Death." *The New Inquiry*. Web. August 15, 2013. http://the newinquiry.com/essays/playing-with-death/

Garreau, Joel. *Radical Evolution: The Promise and Peril of Enhancing Our Minds, Our Bodies – and What It Means to Be Human*. New York: Broadway, 2005.

Geier, Manfred. "Stanislaw Lem's Fantastic Ocean: Toward a Semantic Interpretation of *Solaris*." Trans. Edith Welliver. *Science Fiction Studies* v. 19, no. 2 (July 1992): 192–218.

Gibson, William. *Burning Chrome*. New York: Arbor House, 1986.

———. *Neuromancer*. New York: Ace, 1984.

Gilliam, Terry, dir. *Twelve Monkeys*. Universal Pictures, 1996.

Goetzel, Ben. "Does Humanity Need an AI Nanny?" *H+*. Web. August 17, 2011. http://hplusmagazine.com/2011/08/17/does-humanity-need-an-ai-nanny/

Gomel, Elana. "From Dr. Moreau to Dr. Mengele: The Biological Sublime." *Poetics Today* v. 21, no. 2 (2000): 393–421.

———. *Postmodern Science Fiction and the Temporal Imagination*. New York: Continuum, 2010.

Gould, Stephen Jay. *The Mismeasure of Man*. New York: Norton, 1996.

Grant, Glenn. "Transcendence Through Detournement in William Gibson's *Neuromancer*." *Science Fiction Studies* v. 17, no. 1 (1990): 41–49.

Groz, Elizabeth. *Volatile Bodies: Toward a Corporeal Feminism*. Bloomington: Indiana University Press, 1994.

Gutiérrez-Jones, Carl. "Encyclopedic Arc: Gravity's Rainbow and Ephraim Chambers' *Cyclopaedia*." *International Journal of the Book* v. 8, no. 1 (2011): 19–30.

Harvey, David. *A Brief History of Neoliberalism*. Oxford: Oxford University Press, 2007.

Hawkins, Jeff. *On Intelligence: How a New Understanding of the Brain Will Lead to the Creation of Truly Intelligent Machines*. New York: St. Martin's Griffin, 2004.

Hayles, N. Katherine. *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics*. Chicago: University of Chicago Press, 1999.

———. "Intermediation: The Pursuit of a Vision." *New Literary History* v. 38, no. 1 (2007): 99–125.

———. "The Materiality of Informatics." *Configurations* v. 1, no. 1 (1993): 147–170.

———. *My Mother Was a Computer: Digital Subjects and Literary Texts*. Chicago: University of Chicago Press, 2005.

———. "Space for Writing: Stanislaw Lem and the Dialectic 'That Guides My Pen'." *Science Fiction Studies* v. 13, no. 3 (November, 1986): 292–312.

Hedges, Chris and Laila Al-Arian. *Collateral Damage: America's War Against Iraqi Civilians*. New York: Nation Books, 2009.

Heinzerling, Lisa. "Pragmatists and Environmentalists." *Harvard Law Review* v. 113, no. 6 (2000): 1421–1447.

Helford, Elyce Rae. "'We Are Only Seeking Man': Gender, Psychoanalysis, and Stanislaw Lem's *Solaris*." *Science Fiction Studies* v. 19, no. 2 (July 1992).

———. "'Would You Really Rather Die than Bear My Young?': The Construction of Gender, Race, and Species in Octavia E. Butler's 'Bloodchild.'" *African American Review* v. 28, no. 2 (1994): 259–271.

Hollinger, Veronica. "Cybernetic Deconstructions: Cyberpunk and Postmodernism." In *Storming the Reality Studio: A Casebook of Cyberpunk and Postmodern Fiction*. Ed. Larry McCafferty. Durham, NC: Duke University Press, 1991: 203–218.

———. "Feminist Science Fiction: Breaking Up the Subject." *Extrapolation* v. 31, no. 3 (1990): 229–239.

———. "(Re)reading Queerly: Science Fiction, Feminism, and the Defamiliarization of Gender. *Science Fiction Studies* v. 26, no. 1 (1999): 23–40.

Hughes, James. *Citizen Cyborg: Why Democratic Societies Must Respond to the Redesigned Human of the Future*. New York: Basic Books, 2004.

Huntington, John. *The Logic of Fantasy: H. G. Wells and Science Fiction*. New York: Columbia University Press, 1982.

Jameson, Fredric. *Archaeologies of the Future: The Desire Called Utopia and Other Science Fictions*. New York: Verso, 2005.

———. *The Political Unconscious: Narrative as a Socially Symbolic Act*. Ithaca, NY: Cornell University Press, 1982.

———. *Postmodernism, or the Cultural Logic of Late Capitalism*. Durham, NC: Duke University Press, 1990.

Jamesr. "The Launch of *Spook Country* by William Gibson." *Soundtracksforthem*. Web. September 23, 2007. http://soundtracksforthem.com/blog/?p=354

Jardine, Alice. *Gynesis: Configurations of Woman and Modernity*. Ithaca, NY: Cornell University Press, 1986.

Johnson, Rian, dir. *Looper*. Endgame Entertainment, 2012.

Jones, Duncan, dir. *Source Code*. Vendome Pictures, 2011.

Joy, Bill. "Why the Future Doesn't Need Us." *Wired*. Web. April 1, 2000. http://www.wired.com/wired/archive/8.04/joy.html

Kelly, Richard, dir. *Donnie Darko*. Pandora Cinema, 2002.

Kenan, Randall. "An Interview with Octavia E. Butler." *Callaloo* v. 14, no. 2 (1991): 495–504.

Kilgore, Dewitt Douglas. *Afrofuturism: Science, Race, and Visions of Utopia in Space*. Philadelphia: University of Philadelphia Press, 2003.

Krabbenhoft, Kenneth. "Lem as Moral Theologian." *Science Fiction Studies* v. 21, no. 2 (July 1994): 212–224.

Kristeva, Julia. "The Adolescent Novel." In *Abjection, Melancholia, and Love. The Work of Julia Kristeva*. Eds. John Fletcher and Andrew Benjamin. New York: Routledge, 1990: 13–30.

Kubrick, Stanley, dir. *A Clockwork Orange*. Warner Brothers, 1972.

Kuhn, Annette, ed. *Alien Zone: Cultural Theory and Contemporary Science Fiction Cinema*. New York: Verso, 1990.

Kuo, Ryan. "Loss of Death: Suicides in Videogames." *Gamespy*. Web. April 6, 2010. http://www.gamespy.com/articles/108/1081824p1.html

Kurzweil, Ray. *The Singularity Is Near: When Humans Transcend Biology*. New York: Penguin, 2005.

LaCapra, Dominick. *Representing the Holocaust: History, Theory and Trauma*. Ithaca, NY: Cornell University Press, 1996.

Landon, Brooks. *The Aesthetics of Ambivalence: Rethinking Science Fiction Film in the Age of Electronic (Re)production*. Westport, CT: Greenwood, 1992.

Landow, George. *Hypertext: The Convergence of Contemporary Critical Theory and Technology*. Baltimore: Johns Hopkins University, 1992.

Landsberg, Alison. "Prosthetic Memory: *Total Recall* and *Blade Runner*." In *Liquid Metal: The Science Fiction Film Reader*. Ed. Sean Redmond. London: Wallflower, 2004: 239–248.

Lankester, Ray. *Degeneration: A Chapter in Darwinism*. London: Macmillan, 1880.

Layton, Bentley, ed. *Hag Hammadi Codex II, 2–7, Together with XIII, 2, Brit. Lib. Or 4926 (1) and P. Oxy. 1, 654, 655: Gospel According to Thomas, Gospel According to Philip, Hypostasis of the Archons and Indexes*. Leiden, the Netherlands: E. J. Brill, 1989: IX.

Le Guin, Ursula. *The Lathe of Heaven*. New York: Scribner, 1971.

Lem, Stanislaw. *The Astronauci* (The Astronauts). Warsaw, Poland: Czytelnik, 1951.

———. *Highcastle: A Remembrance*. Trans. Micael Kandel. New York: Harcourt Brace, 1995.

———. *His Master's Voice*. Trans. Michael Kandel. Evanston, IL: Northwestern University Press, 1999.

———. *Hospital of the Transfiguration*. Trans. William Brand. New York: Harcourt Brace, 1988.

———. *Microworlds*. Ed. Franz Rottensteiner. New York: Harcourt Brace, 1984.

———. *Solaris*. Trans. Joanna Kilmartin and Steve Cox. New York: Harcourt, 1970.

———. *Solaris: The Definitive Edition*. Trans. Bill Johnston. Newark, NJ: Premier Digital Publishing, 2011.

Lennard, John. *Reading Octavia E. Butler: Xenogenesis / Lilith's Brood*. 2012. Penrith, CA: Humanities-Ebooks, 2010.

Lenoir, Tim and Henry Lowood. "Theaters of War: The Military-Entertainment Complex." In *Kunstkammer, Laboratorium, Bühne – Schauplätze des Wissens im 17. Jahrhundert/ Collection, Laboratory, Theater, Berlin*. Eds. Jan Lazardzig, Helmar Schramm, Ludger Schwarte. City: Walter de Gruyter Publishers, 2003.

Levine, George. *Darwin and the Novelists: Patterns of Science in Victorian Fiction*. Cambridge, MA: Harvard University Press, 1988.

———. *Darwin Loves You: Natural Selection and the Re-enchantment of the World*. Princeton, NJ: Princeton University Press, 2006.

———. *Dying to Know: Scientific Epistemology and Narrative in Victorian England*. Chicago: University of Chicago Press, 2002.

Levine, Ken, dir. *Bioshock Infinite*. 2K Games, 2013.

Lodge, David. *A Man of Parts: A Novel*. New York: Viking, 2011.

———. "The Novelist at the Crossroads." *Critical Quarterly* v. 11, no. 2 (2007): 105–132.

Lopez, Ian Haney. *Racism on Trial: The Chicano Fight for Justice*. Cambridge, MA: Harvard University Press, 2003.

Malmgren, Carl. *Worlds Apart: Narratology of Science Fiction*. Bloomington: Indiana University Press, 1991.

McCafferty, Larry. "An Interview with William Gibson." In *Storming the Reality Studio: A Casebook of Cyberpunk and Postmodern Fiction*. Ed. Larry McCafferty. Durham, NC: Duke University Press, 1991: 263–285.

McCarthy, Cormac. *The Road*. New York: Vintage, 2007.

McGee, American, dir. *Alice*. Electronic Arts, 2000.

McHale, Brian. "POSTcyberMODERNpunkISM." *Storming the Reality Studio: A Casebook of Cyberpunk and Postmodern Fiction*. Ed. Larry McCafferty. Durham, NC: Duke University Press, 1991: 308–323.

———. *Postmodernist Fiction*. New York: Routledge, 1987.

McTeigue, James, dir. *V for Vendetta*. Warner Brothers, 2006.

Melley, Timothy. *Empire of Conspiracy: The Culture of Paranoia in Postwar America*. Ithaca, NY: Cornell University Press, 2000.

Melzer, Patricia. *Alien Constructions: Science Fiction and Feminist Thought*. Austin, TX: University of Texas Press, 2006.

Minois, Georges. *History of Suicide: Voluntary Death in Western Culture*. Trans. Lydia Cochrane. Baltimore: Johns Hopkins University, 1999.

MovieMaster. "Rumor: Will Inception 2 Be Christopher Nolan's Next Movie?" *Comic BookMovie*. Web. January 8, 2012. http://www.comicbookmovie.com/fansites/MovieMaster/news/?a=52442http://www.comicbookmovie.com/fansites/MovieMaster/news/?a=52442

Mulvey, Laura. "Visual Pleasure and Narrative Cinema." *Screen* v. 16, no. 3 (Autumn, 1975): 6–18.

Murphy, Bruce, ed. *Benet's Reader's Encyclopedia, 5th Edition*. New York: Collins, 2008.

Nemiroff, Perri. "*Looper* Interview: Rian Johnson and Joseph Gordon-Levitt on Time Travel, Deleted Scenes, and Sequels." *Screenrant*. Web. July 17, 2012. http://screenrant.com/looper-interviews-sequels-deleted-scenes/

Neumyer, Scott. "Rian Johnson Talks *Looper*, Bruce Willis' Voiceover, and *Breaking Bad*." *IFC*. Web. January 9, 2013. http://www.ifc.com/fix/2013/01/rian-johnson-interview-looper-bruce-willis-breaking-bad

Niccols, Andrew, dir. *Gattaca*. Columbia Pictures, 1997.

Niewyk, Donald L. *The Columbia Guide to the Holocaust*. New York: Columbia University Press, 2000

Nolan, Christopher, dir. *Inception*. Warner Brothers, 2010.

———. *Inception:* The Shooting Script. San Rafael, CA: Insight Editions, 2010.

Otto, Eric. *Green Speculations: Science Fiction and Transformative Environmentalism*. Columbus, OH: The Ohio State University Press, 2012.

Pape, Robert A. "Suicide Terrorism and Democracy: What We've Learned Since 9/11." Policy Analysis No. 582. Cato Institute. Web. November 1, 2006. http://www.cato.org/publications/policy-analysis/suicide-terrorism-democracy-what-weve-learned-911

Parrinder, Patrick and Robert M. Philmus, eds. *H. G. Wells' Literary Criticism*. Totowa, NJ: Barnes and Nobel, 1980.

Pearson, Wendy. "Alien Cryptographies: The View from the Queer." *Science Fiction Studies* v. 26, no. 1 (1999): 1–22.

Penley, Constance. "Time Travel, Primal Scene, and the Critical Dystopia." In *Liquid Metal: The Science Fiction Film Reader*. Ed. Sean Redmond. London: Wallflower, 2004.

Pierre, Jose. "Gustave Moreau Through the Eyes of Succeeding Generations." In *Gustave Moreau*. Eds. Jean Paladilhe and José Pierre. New York: Praeger, 1972.

Pontecorvo, Gillo, dir. *The Battle of Algiers*. Igor Films, 1966.

Ptolemy, Robert, dir. *Transcendent Man*. Docurama, 2009.

Renault, Gregory. "Science Fiction as Cognitive Estrangement: *Darko Suvin* and the Marxist Critique of Mass Culture." *Discourse* 2 (1980): 113–141.

Robertson, Thomas. *The Malthusian Moment: Global Population Growth and the Birth of American Environmentalism*. New Brunswick, NJ: Rutgers University Press, 2012.

Robinson, James. *The Nag Hammadi Library*. New York: Harper and Row, 1977.

Rose, Mark. *Alien Encounters: Anatomy of Science Fiction*. Cambridge, MA: Harvard University Press, 1981.

———. "Filling the Void: Verne, Wells, and Lem." *Science Fiction Studies* v. 8, no. 2 (July 1981): 121–142.

Russ, Joanna. *To Write Like a Woman: Essays in Feminism and Science Fiction*. Bloomington: Indiana University Press, 1995.

Schumpeter, Joseph. *Capitalism, Socialism, and Democracy*. London: Ruskin House, 1943.

Scott, Ridley, dir. *Blade Runner*. Ladd Company, 1982.

Shaviro, Steven. *The Cinematic Body*. Minneapolis: University of Minnesota Press, 1993.

Sherborne, Michael. *H. G. Wells: Another Kind of Life*. London: Peter Owen, 2012.

Shute, Nevil. *On the Beach*. New York: Vintage, 2010.

Simon, Roger. "Innocence Lost Forever on 9/11." *US News and World Report*. Web. September 14, 2001. http://www.usnews.com/news/articles/2001/09/14/innocence-lost-forever-on-911

Singer, P. W. *Corporate Warriors: The Rise of the Privatized Military Industry*. Ithaca, NY: Cornell University Press, 2007.

Slone, Isabel. "'Who Survives, Who Doesn't?' An Interview with Margaret Atwood." *Hazlitt*. Web. August 30, 2013. http://www.randomhouse.ca/hazlitt/feature/%E2%80%9Cwho-survives-who-doesn%E2%80%99t%E2%80%9D-interview-margaret-atwood

Slotkin, Richard. *Regeneration Through Violence: The Mythology of the American Frontier, 1600–1860*. Norman, OK: University of Oklahoma Press, 2000.

Smelik, Anneke. "Lara Croft, *Kill Bill*, and the Battle for Theory in Feminist Film Studies." In *Doing Gender in Media, Art, and Culture*. Eds. Rosemarie Buikema and Iris Van der Tuin. New York: Routledge, 2009.

Smith, Samuel. "'When It All Changed': Cyberpunk and the Baby Boom's Rejection of Religious Institutions." In *Youth Culture: Identity in a Postmodern World*. Ed. Jonathon Epstein. New York: Blackwell, 1998: 232–262.

Snyder, Katherine. "Time to Go: The Post-Apocalyptic and the Post-Traumatic in Margaret Atwood's *Oryx and Crake*." *Studies in the Novel* v. 43, no. 4 (Winter 2011): 470–489.

Sobchack, Vivian. "Postfuturism." In *Liquid Metal: The Science Fiction Film Reader*. Ed. Sean Redmond, London: Wallflower, 2004.

———. *Screening Space: The American Science Fiction Film*. New Brunswick, NJ: Rutgers University Press, 1997.

Sterling, Bruce. "Preface." In *Mirrorshades: The Cyberpunk Anthology*. Ed. Bruce Sterling. Berkeley, CA: Ace Books, 1988.

Strick, Philip and Penelope Houston. "Interview with Stanley Kubrick." In *Stanley Kubrick Interviews*. Jackson, MS: University of Mississippi Press, 2001: 126–139.

Suvin, Darko. *Metamorphoses of Science Fiction: On the Poetics and History of a Literary Genre*. New Haven, CT: Yale University Press, 1979.

———. "On Gibson and Cyberpunk." In *Storming the Reality Studio: A Casebook of Cyberpunk and Postmodern Fiction*. Ed. Larry McCafferty. Durham, NC: Duke University Press, 1991: 349–365.

Teismann, Tobias, Eva-Maria A. D. Förtsch, Patrick Baumgart, Serkan Het, and Johannes Michalak. "Influence of Violent Video Gaming on Determinants of the Acquired Capability for Suicide." *Psychiatry Research* v. 251, no. 1 (January 30, 2014): 217–222.

Telotte, J. P. "Human Artifice and the Science Fiction Film." In *Liquid Metal: The Science Fiction Film Reader*. Ed. Sean Redmond. London: Wallflower, 2004.

Tenner, Edward. *Our Own Devices: The Past and Future of Body Technology*. New York: Knopf, 2003.

Thibodeau, Amanda. "Alien Bodies and a Queer Future: Sexual Revision in Octavia Butler's 'Bloodchild' and James Tiptree, Jr.'s 'With Delicate Mad Hands.'" *Science Fiction Studies* v. 39, no. 2 (2012): 262–282.

Tighe, Carl. "Stanislaw Lem: Socio-Political Sci Fi." *Modern Language Review* v. 94, no. 3 (July 1999): 758–774.

Turing, Alan M. "Computing Machinery and Intelligence." *Mind* 59 (1950): 433–460.

Truffaut, Francois, dir. *Farhenheit 451*. Anglo Enterprises, 1966.

Ubelacker, Sheryl. "Interview with Margaret Atwood." *CTV News*. Web. August 23, 2013. http://www.ctvnews.ca/entertainment/atwood-s-maddaddam-trilogy-a-cautionary-tale-told-with-humour-1.1424047

United States Government Accountability Office. *Information Resellers: Consumer Privacy Framework Needs to Reflect Changes in Technology and the Marketplace*. GAO 13–663 (September 25, 2013).

Verne, Jules. *In Search of Castaways*. London: Piccadilly, 2009.

Vint, Sherryl. *Animal Alterity: Science Fiction and the Question of the Animal*. Liverpool: Liverpool University Press, 2010.

———. "Animals and Animality from The Island of Moreau to the Uplift Universe." *The Yearbook of English Studies* v. 37, no. 2 (2007): 85–102.

Von Neumann, John. *The Computer and the Brain*. New Haven, CT: Yale University Press, 2000.

Walls, Gary. "The Normative Unconscious and the Political Contexts of Change in Psychotherapy." In *Psychoanalysis, Class and Politics: Encounters in the Clinical Setting*. Eds. Lynne Layton, Nancy Caro Hollander, and Susan Gutwill. New York: Routledge, 2006.

Weissert, Thomas. "Stanislaw Lem and the Topology of Mind." *Science Fiction Studies* v. 19, no. 2 (July 1992): 161–166.

Wells, H. G. *H. G. Wells: Early Writing in Science and Science Fiction*. Eds. Philmus, Robert and David Hughes. Berkeley: University of California Press, 1975.

———. *The Time Machine*. New York: Penguin, 2005.

———. *Island of Doctor Moreau*. Minneapolis, MN: Filiquarian, 2007.

Wiegman, Robyn. *American Anatomies: Theorizing Race and Gender*. Durham, NC: Duke University Press, 1995.

Wiener, Norbert. *Cybernetics, or Control and Communication in the Animal and the Machine*. Cambridge, MA: MIT Press, 1965.

———. *The Human Use of Human Beings*. Cambridge, MA: Da Capo Press, 1988.

Wolmark, Jenny. *Aliens and Others: Science Fiction, Feminism, and Postmodernism*. Iowa City: University of Iowa, 1993.

World Meteorological Organization. "Greenhouse Gas Concentrations in Atmosphere Reach New Record." Web. November 6, 2013. http://www.wmo.int/pages/mediacentre/press_releases/pr_980_en.html

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